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THE COMMITTEE ON SCHOOL AND COLLEGE RELATIONS

The hindrances to reform of the curriculum in secondary schools represented in the requirements for admission to conservative colleges are notorious. Persistent expostulation by friends of modern secondary education has brought some modification of the requirements, particularly in the West and the Midwest, but the degree of freedom generally achieved is still far from enough to permit the lower school to map out a program adapted to the needs of youth. The requirements in many quarters oblige the school to adhere to a program warped to fit an outworn conception of preparation for college.

A recent promising effort to hasten the emancipation of the secondary school is represented in the work of the Committee on School and College Relations of the Progressive Education Association. This committee, organized more than a year ago, as now made up numbers twenty-seven members representing public and private secondary schools and higher institutions. Wilford M. Aikin, director of the John Burroughs School of St. Louis County, Missouri, is chairman. The work of the committee has lately been facilitated by

a grant of funds from the Carnegie Foundation for the Advancement of Teaching.

The committee is now conducting a series of six regional conferences at higher institutions. At these conferences a tentative plan of experimental co-operation is presented and discussed. The plan is one previously worked out during the deliberations of the committee at the same time that agreement was being reached on basic principles and on desirable types of change in the secondary-school curriculum.

The nature of the plan for co-operation being discussed at the conferences is indicated in the following quotation from the materials submitted to those in attendance.

A small number of secondary schools shall be chosen to carry on experiments in secondary education. The number of schools will be limited so as not to be unwieldy for experimental purposes. It shall include public and private schools each with funds, faculty personnel and interest, parental support, and administrative leadership adequate for the task. Only schools of highest character and excellence will be admitted to this group. These schools shall enter into an admissions arrangement with colleges for an experimental period of five years beginning with the autumn of 1936.

As soon as possible after the arrangement is made, a joint committee shall be established, with a central staff working under it, to study all aspects of the operation of the plan. The joint committee in its work will (1) indicate improved methods of procedure from time to time during the period of the experiment, (2) establish a plan for regular visits to the co-operating schools by college representatives and vice versa, (3) suggest such modifications in college regulations for the students entering during the five-year period under the new arrangement as will conserve the fundamental educational values of the experiment, and (4) systematically observe the students under the changed conditions during their college course and as many years thereafter as seems wise with the idea of evaluating the work of the new secondary school.

The method proposed for the admission of students to college during the experimental period involves application of the following criteria:

1. Recommendation of the principal of the co-operating secondary school to the effect that the graduating student (a) is possessed of the requisite general intelligence to carry on college work creditably, (b) has well-defined serious interests and purposes, (c) has demonstrated ability to work successfully in one or more fields of study in which the college offers instruction.

2. A carefully recorded history of the student's school life and other activities

and interest, including scores on scholastic-aptitude, achievement, and other diagnostic tests given at periods during the secondary-school course by the schools and directly related to the new school curriculums.

It is intended that the tests used will be of such excellence and comprehensive character that the results submitted to the colleges will give a far more adequate and complete picture of the candidate than any obtained by methods now in use. The joint committee will experiment with tests, seeking constantly to fit them more satisfactorily to the purposes of the experiment, but the decision regarding their use in any school shall be left to the school itself.

The co-operating colleges will not be obliged to admit under this agreement all such students as meet the new requirements. However, during the experimental period and from the limited group of co-operating schools, the colleges agree to accept students under this plan and without regard to course and unit requirements now generally in force for all students.

The materials submitted at the conferences include a summary of the "underlying ideas" of the proposal. The conferees are informed that the educational emphasis in the plan is based on a realization that the secondary schools must become more effective in helping young people to develop the insight and the general and special powers and the self-direction necessary for resourceful and constructive living.

To this end we should like to provide, more fully than the present organization of the secondary school permits, for: (1) more continuity in learning, greater mastery in whatever fields of learning are undertaken; this includes: acquisition of effective techniques of study and of expression, capacity to see facts in their relationships, power to organize knowledge for a valid purpose, power and impetus to pursue learning beyond the limits of the "assignment"; (2) more chance for the release of creative energies; (3) more time and scope for pupils, with guidance, to develop their varied types of power and talent with the highest possible skill and seriously to pursue their special interests; and (4) more definite plans to help children to realize the interdependence and the interrelationships of human life and to develop a feeling for social responsibility.

We want to work toward a type of secondary education which will be flexible, responsive to changing needs, clearly based upon an understanding of characteristics of children between the ages of twelve and eighteen, as well as upon an understanding of the qualities needed in adult life.

The committee also submits at these conferences some indications of the types of studies and practices it would like to include in secondary-school procedure and suggestions for conditions which should be the basis for experimentation. These pertain to methods

of learning, attitudes of pupils toward learning, curriculum materials and their organization, individual and group activities, and guidance of pupils.

Among these indications the changes relating to materials and organization of the curriculum appear to be more concrete and definitive than others. According to the proposals, these changes will be along the following lines: (1) experiments in reorganizing the sequence of material in different fields of knowledge, for example, in mathematics, science, history, and languages; (2) investigations in unified fields of subject matter (the removal of boundaries now existing between closely related fields, such as physics and chemistry, science and mathematics, and history in its relation to facts of economics, geography, literature, and fine arts); (3) experiments in introducing new materials from fields of knowledge not hitherto included in the typical secondary-school curriculum, such as materials from the fields of economics, anthropology, and psychology; (4) inclusion in the curriculum of studies which will more effectively direct attention toward the specific problems of American civilization and the outstanding individual and collective efforts at solving these problems; and (5) wide experience in the arts, both in practice and in appreciation and both in exploring a variety of fields and in concentrated work in special fields like painting, modeling, writing, drama, and music.

Readers conversant with practices will recognize the types of curriculum changes listed as among those already being carried on here and there in innovating secondary schools of the country less hampered than others by preparatory prescriptions. They are not strictly novel proposals. The same may be said of most, if not all, of the remaining groups of modifications suggested. It is apparent that the committee is not asking for the complete abandonment of order and system implied in the somewhat irrational and extravagant proposals of the extremists of progressivism in education—extremists who may be thought of as the “fanatic fringe” of the movement.

The program of co-operative experimentation outlined can be productive of great good. At the same time that it works toward the further liberation of the secondary school, it should bring about a more general understanding and appreciation of desirable types of education at that level. In order that maximum value from the

whole program may be assured, it will be essential to adhere, as the proposal indicates, to careful experimental arrangements, to keep complete records of changes made and of ability and performance of students, and to interpret discriminately the large amount of evidence that will accumulate in the institutions participating.

HINDRANCES TO JUNIOR HIGH SCHOOL REORGANIZATION

Among the papers presented at the last meeting of the Association of Colleges and Secondary Schools of the Southern States was one on "Utilizing Individual Differences in the Junior High School," prepared by C. A. Gardner, principal of the North Side Senior High School, Fort Worth, Texas. This paper reported the results of an inquiry made of principals of fifty-six junior high schools in southern states which went into the questions of the purposes of the junior high school, the major hindrances to achieving these purposes, and the practices being carried on to "utilize" individual differences. Although all three phases of the paper have meaning for those concerned with education at the junior high school level, we draw only on the part concerned with the obstacles to carrying through the purposes of the junior high school. These hindrances are listed in the accompanying table in the order of declining frequency of report by the principals, together with the percentage of principals reporting them. In part, Mr. Gardner has the following to say in interpreting the evidence of the table.

It will be noted that the item, "Little, if any, opportunity for segregation of subnormals and misfits" tops the list of major hindrances, while "Limited opportunity for exploration of individual pupil interests" and the item "Lack of definite and valid criteria for evaluating the results of individual pupil treatment" tie for second place. "Inadequate provision for psychological and prognostic testing that assists in discovering individual differences" ranks third, while "Inadequate financial provision" and "Influence of college in stressing academic offerings" together with "Inadequate counseling, guidance, and pupil-adjustment program" are given almost equal stress at the fourth place in the list. Closely related to all these and almost equal in frequency are (1) "Lack of elasticity in subject-matter offerings" and (2) "Little opportunity for modifying curriculum that individual differences may be utilized." A little less than one-half the principals believe that their efforts to provide for individual differences are hindered by senior high school graduating requirements and by inadequate preparation of teachers for understanding and using adolescent psychology and the junior high school idea and philosophy. More than one-fourth indicate

that they are hindered by (1) burdensome clerical duties of teachers and principals, (2) traditional views of teachers, (3) inadequate extra-curriculum programs, (4) and the influence of state departments of education on school offerings. About one-fourth state that they are hampered by inadequate supervision and by the conservatism of their communities.

**HINDRANCES TO ACHIEVING THE PURPOSES OF THE
JUNIOR HIGH SCHOOL AND THE PERCENTAGES
OF PRINCIPALS REPORTING EACH**

Hindrances	Percentage of Principals
Little, if any, opportunity for segregation of subnormals and misfits	73
Limited opportunity for exploration of individual pupil interests, aptitudes, abilities, capacities, and needs because of inadequate broadening and finding courses	68
Lack of definite and valid criteria for evaluating the results of individual pupil treatment	68
Inadequate provision for psychological and prognostic testing that assists in discovering individual differences	64
Inadequate financial provision	61
Influence of college in stressing academic offerings	59
Inadequate counseling, guidance, and pupil-adjustment program	57
Lack of elasticity in subject-matter offerings	54
Little opportunity for modifying curriculum that individual differences may be utilized	54
Influence of senior high school graduation requirements	48
Inadequate preparation of teachers in an understanding of the nature and need of early adolescence and in discovering and utilizing individual differences	43
Inadequate understanding and appreciation by teachers of the junior high school idea	43
Conservatism of teachers because of devotion to traditional school offerings	43
Influence of state department of education in determining school offerings	34
Inadequate administrative and clerical assistance for principal and his administrative assistants	30
Small opportunity for an adequate extra-curriculum program	27
Limited time due to heavy clerical load of teachers	27
Conservatism of community toward progressive school practices	25
Inadequate supervision which is not consonant to a high degree with the junior high school idea and purpose	25

For purposes of further analysis of the problem, these hindrances may be variously grouped. One group might include features of reorganization, such as limitations in guidance, curriculum differentiation, segregation of pupils, and the extra-curriculum. Another group might relate to inadequacies of the teaching staff. Still another would concern limitations imposed by control outside the junior high school. Such groupings may help to locate the points where efforts may be expended to remove the obstacles to thoroughgoing reorganization. It is clear enough that the attack must be on many fronts at once. Here is an opportunity for vigorous leadership on the part of principals of the schools and others sympathetic with genuine reorganization.

THE PROPOSED REORGANIZATION OF VOCATIONAL EDUCATION IN NEW YORK CITY

The Vocational Survey Commission appointed by the Board of Education of New York City has made its first report, which consists of "General Recommendations." These recommendations, if carried out, will require major changes in the organization of vocational education now operative there. The essential feature of the proposal is the establishment of two types of schools. The first type would include a limited number of "central special schools," each housing all pupils taking instruction in a single trade or group of related trades and providing full-time, part-time, apprentice, and evening programs for pupils of all ages beyond fourteen. The second would be "local general schools," the main function of which would be vocational guidance, finding, and tryout. These schools also would provide for all types of time programs and would offer short-unit training courses in those vocations not covered in the central specialized schools. The following statement by Franklin J. Keller, director of the commission, which was published in the *New York Times*, gives further details of the proposed plan.

The dream of the educational theorist in a democracy is an educational system that will adjust every boy and girl to the economic and social life of the civilization into which he is born. The hope and faith of every parent is that this dream may come true. In this practical age there must still be vision, but actuality can result only from careful planning based upon the realities of the situation.

The first report of the Vocational Survey Commission, appointed about a year ago by President George J. Ryan of the Board of Education, and headed by Deputy Superintendent Harold G. Campbell, has attempted to outline in broad strokes a program which, if carried out understandingly and zealously, will ultimately result in a truly democratic educational organization. It will guarantee to all boys and girls under the age of eighteen some kind of education fitted to their needs and adapted to the development of men and women who can cope successfully with the world in which they will have to live.

This sounds like a big order, and it is. But there is every reason why the great city of New York, with a wealth of talent in its schools, should aspire to the best in education. In the hope of contributing to this desideratum the Vocational Survey Commission has approached its task and published its first report.

The commission adopts the thesis that vocational education is a phase of secondary education and that boys and girls in any type of vocational school are entitled to teachers, buildings, equipment, and all other facilities consistent with the needs and of exactly the same high quality as that in the best academic high schools. In a democracy there should be no aristocracy of learning. Equal educational opportunity must be open to all. If such a policy is adopted by a board of education, all parents may be assured that their children, regardless of the particular direction of their talents, will be fully provided for.

It must be emphasized, however, that the commission is not of the opinion, so often expressed by school administrators and others, that "the panacea for the failing pupil is vocational work." A failure in strictly academic subjects by no means implies probable success in vocational work. The commission does believe, however, that it is the duty of a community to provide facilities whereby every student may discover in what occupational activity he can succeed and that it must then further provide training in that activity as long as the pupil wishes to take advantage of it.

At present industrial high schools receive pupils only up to the capacity of their buildings (and this is extremely limited), while general high schools accept everybody who has been graduated from an elementary school. The capacity of buildings is stretched to the limit, and programs are devised to accommodate the academic-minded, but thousands of those who are gifted with motor facility and may or may not know it are deprived of guidance and training in those activities in which they are most likely to succeed.

To meet the need of the pupil who is ill adapted to the traditional general education, who has not chosen a specific trade-training course, and who for various reasons is barred from central schools of intensive trade training, the commission recommends the development of a new type of institution, the "vocational high school," which shall admit all pupils who apply.

Such a school will not prepare for specific major vocations to be taught in central schools but will offer the pupils a wide variety of occupational experiences to help them make their adjustments to life. In fact, it might well be called a vocational-guidance high school. It will accommodate both full-time

and part-time pupils. It will provide cultural and related subjects as demanded by the needs of the children. It will admit any child at any time of the school year. It will program his work individually, enabling him to progress as rapidly as his ability permits. It will retain him as long as he wishes to remain and provide him with certification of work actually accomplished when he leaves.

This type of school is not a far-fetched dream but is even now approaching a reality. The objectives and the organization of the general continuation schools have been such as to make it possible to convert them readily into vocational high schools, and, after thoroughgoing discussion of the report of the commission by the board of superintendents, this educational body has taken first steps toward reorganization.

The ever-recurrent criticism of academic schools (sometimes justified, sometimes not) is that they do not embody actual life conditions, that they teach knowledge and skills for which the pupils later have no use. Vocational schools which profess to prepare specifically for at least one of the stern realities of life, namely, occupations, lay themselves open to the same criticism when their trade methods and their equipment are not modernized along with the industry itself.

The commission has been particularly concerned with this phase of vocational education. This is easily understandable, as both employers and workers are represented on the commission. Under the chairmanship of Dr. Campbell, there are serving Mrs. Betty Hawley, who is executive secretary of the Advisory Board on Industrial Education as well as vice-president of the New York State Federation of Labor; Joseph F. Dujat, an employer and a member of the Joint Apprentices Commission of the Building Congress; E. W. Edwards, member of the State Industrial Commission and chairman of the committee on education of the State Federation of Labor, and Mrs. Margaret McAleenan, member of the Board of Education.

These men and women realize the importance of keeping the schools close to the actualities of occupational life and have therefore recommended that in connection with the planning of every vocational school there be organized a strong advisory committee of employers and employees.

This is an extension of an idea already carried out in part. There already exists, under the state education law, the Advisory Board on Industrial Education, of which Dr. John H. Finley is chairman. It has already organized educational commissions for the printing trades, the needle trades, the building trades, the metal trades, and aviation.

Only the leaders in their respective fields are included; only those who can speak authoritatively for their fellow-employers and fellow-employees are asked to help shape the vocational-education policy of the Board of Education. It is only through such groups as these that vocational schools can become and remain institutions to which parents may send their boys in full confidence that they will be equipped to succeed as workers.

It is not enough that training shall be effective. It must be training for the

right vocation, right for child and right for society. The commission believes, therefore, that it is impossible for vocational education to function successfully unless it is accompanied by a strong guidance program, and it strongly urges the adoption of such a program for all types of vocational school.

The detailed organization of the guidance program will vary with the type of school, but in these general recommendations the commission sets up guiding principles which in later reports will be followed by detailed plans. It contemplates continuous curriculum revision, skilled counselors, home-room teachers, interviews, courses in occupational information, tryout opportunities, testing programs, personnel records, placement, and co-ordination. It is felt that a program including these activities will assure the treatment of each boy and girl as an individual personality for whom the services of the school will function to the fullest extent.

The welfare of the individual involves, in part, the close articulation of one type of school with another. It involves progressive courses of study and a continuity of objective. Junior high schools already exist. Their guiding, exploratory functions should be intensified, their facilities should be increased, and their number should be extended.

Pupils who are industrially inclined should then be guided to either one of two new types of school which the commission recommends that the Board of Education organize. These units are, first, central special schools, of which there would be a limited number, each of them housing all the students taking instruction in one trade or group of related trades (full-time, part-time, apprenticeship, and evening); and, second, local general schools, the main function of which shall be vocational guidance, finding, tryout—again for students of all ages beyond fourteen on all types of time programs, with short-unit training courses in those vocations not covered in the central schools.

The "local general schools" are the vocational high schools already mentioned. The central schools are for intensive training for a high degree of skill. They will be designed to enable students to see an industry clearly and to see it whole, as well as to afford training in specialized branches of it.

Young men and women attending these schools will be carefully selected, and the number trained for any trade will be determined by the power of the trade to absorb them.

Unity of purpose, co-ordination of effort, and balance of program in the field of vocational education presuppose control by a single person. The commission points out that under the present organization various phases of the work are directed by different associate superintendents. These phases are so intricately interwoven that, with the best will in the world, it is impossible to develop a consistent program. The commission therefore recommends that, as prerequisite to the success of the projects suggested, all the vocational activities under the control of the board of education (including vocational guidance in all schools) be placed in charge of one associate superintendent.

"JUNIOR HIGH SCHOOL READERS IN DISTRESS"

The problem of abilities in reading is increasingly engaging the attention of those at work in schools at the secondary level. Among recent treatments of the subject is a discussion by Walter A. Anderson, assistant in the department of curriculum construction in the Minneapolis public-school system. This discussion deals with the case method as applied to pupils with deficiencies in reading ability in junior high schools and appears in a recent issue of the *Vocational Guidance Bulletin* published by the Minneapolis public schools. The first part of Mr. Anderson's discussion is devoted to presentation of the problem.

Providing special instruction in remedial reading has long presented itself to administrators and teachers of the Minneapolis public schools. When the pupils advance to junior high school, the problem becomes ever more complex because of departmentalization of subjects and the assumption on the part of many teachers that fundamental reading habits are well established. Although results of standardized tests place the Minneapolis elementary schools well above national standards upon several tests of reading abilities, the fact remains that there are pupils in the junior high schools who have escaped the effects of good teaching in the lower grades. This is probably due to a multiplicity of reasons, some of which may be stated as follows: (1) low intelligence, (2) lack of interest in reading, (3) poorly developed fundamental reading habits, (4) home conditions which are not conducive to good reading, (5) undesirable school behavior which may be either a cause or effect of poor reading ability, (6) dislike for teachers, and (7) physical defects.

A detailed study of thirty-one disability cases in reading has been made in one of the local junior high schools. The purpose of the investigation was to establish the need of reading clinics, and it involved the following problems: (1) to discover a group of pupils who were sufficiently retarded in reading to warrant the establishment of a reading clinic, (2) to point out characteristics of this group of pupils, (3) to diagnose their individual educational and reading difficulties, (4) to recommend the remedial instruction to be given each, and (5) to propose a plan for organizing and administering such clinics. This article deals with some of the results.

SHALL INSTRUCTION BE GIVEN?

There are, at the present time, many pupils in our junior high schools who are having difficulty because of inability to read well. It is estimated the percentage reaches well over one-tenth of those who attend in some schools. The difficulties they experience are manifold; the most prevalent may be listed as follows: (1) failure in school subjects because of inability to read understand-

ingly the daily assignments, (2) maladjustment socially because of a sense of failure, and (3) disciplinary difficulties due to inability to keep up to their classmates scholastically.

One investigator in the field of remedial reading, after reviewing the results of experimentation, concludes: "Since there appears to be no acceptable and logical reason why training in the reading abilities of pupils should cease as they pass from the elementary to the secondary school, every teacher may well provide training for the development of such skill as well as disseminate knowledge in her special subject. Perhaps such training may be more important than the subject taught. Certainly, there is no experimental evidence which refutes this supposition. That which is available, although meager, points in the opposite direction" [Alvin C. Eurich, "Shall Instruction Be Given?" *Minnesota Journal of Education*, X (December, 1929), 139-41]. Since the above was written, additional experimentation has pointed out that the retarded junior high school reader should be given a chance to succeed by means of specific instruction to eliminate his reading difficulties.

There is need of special instruction since a large percentage of these pupils expect to go on to high school where increasing demands will be made upon their ability to read. Educational clinics which have as their function the discovery of retarded pupils, the diagnosis of individual difficulties, and the planning and administration of remedial treatment seem justified since there are many pupils in need of such help.

After considering briefly the administrative auspices under which the work should be carried on, Mr. Anderson deals with the method of deciding who should receive the instruction.

The plan for the discovery, diagnosis, and remedial treatment presented in [the accompanying] chart proposes selection for remedial instruction based upon teachers' estimates of ability and achievement, individual intelligence tests, and achievement upon standardized achievement tests. Using the teacher's estimate of pupil's reading ability seems to be the most successful way of first discovering pupils needing remedial instruction. The composite opinion of several teachers that a pupil is having reading difficulty is even more important.

The results of standardized tests are very valuable in substantiating the opinion of teachers and determining the native ability of the pupil. They are imperative for determining the specific reading difficulties of the individual. The testing program should include tests of intelligence, of reading ability of different kinds, and of general achievement.

Preliminary diagnosis includes the compilation of a case history based upon personal interview, home visit by the visiting teacher, school history from available records, and school behavior indicated by teachers' reactions to a behavior rating card. This case history should furnish some information with regard to the causes of reading deficiency as well as centers of interests upon which to plan the remedial program.

A preliminary diagnosis of specific reading abilities is obtained by the use of silent-reading tests of several abilities and an oral-reading test. In the remedial class detailed diagnosis is accomplished by the use of informal tests, observation and study of the individual, and standard tests supplementary to those used in the preliminary diagnosis. Perhaps, assistance by the curriculum department, child-guidance clinic, hygiene department, and the department of counselors and placement would be helpful in certain cases.

DISCOVERY, DIAGNOSIS, AND REMEDIAL TREATMENT OF CANDIDATES FOR READING CLINICS

DISCOVERY OF REMEDIAL CASES

Teachers' estimates
Intelligence quotient
Achievement-test results

PRELIMINARY DIAGNOSIS

Case History	Reading Diagnosis
Personal interview	Test of several silent-reading abilities
Home visit	Test of oral-reading ability
Socio-economic status	
School history	
School behavior	
Physical examination	

REMEDIAL-READING CLASS

Detailed diagnosis
Remedial instruction
Check of results

Remedial instruction is given by the remedial teacher according to the needs of the individual pupils and of the group as a whole. Assistance in the selection of remedial material and in planning remedial instruction is given by the curriculum department. A check of the results of such instruction is made from time to time by the use of standardized tests. The success of such clinics depends upon observable improvement in the ability of the pupils to meet the problems of life.

ARE READING CLINICS PRACTICAL IN JUNIOR HIGH SCHOOL?

Three outstanding difficulties of organizing such clinics in the junior high school may be stated as follows: (1) difficulty of training counselors in the technique of selection and diagnosis, (2) difficulty of securing remedial teachers who are trained to give effective remedial instruction, (3) difficulty of deciding in which subject time should be given to the remedial-reading classes.

The first difficulty may be eliminated by holding a series of meetings for counselors at which techniques of selection and diagnosis would be presented. Enrolment in university classes in supervision would be helpful. Counselors are trained in the administration and interpretation of standardized tests; therefore, their selection for the directorship seems logical.

The selection of teachers for such clinics appears more difficult. Under the present organization the teacher must be selected, in all probability, from the present staff. Few are adequately trained to give remedial instruction. Consequently, the selection of one who is willing and able to study remedial teaching is imperative. Teachers might be trained in remedial teaching by: enrolment in university courses, instruction at special teachers' meetings, observation of expert remedial teaching, and reading and study of methods which have been developed.

The difficulty of deciding in which subject time should be given to the remedial-reading class needs further investigation. The experience of one city recommends taking time from the English classes. The reading clinic which has been organized in one Minneapolis school is using the social-studies period. However, the remedial material is, for the most part, social-studies material, and both teacher and pupils are satisfied that they are not omitting this subject from the curriculum.

In the opinion of the writer, reading clinics can be organized and operated in the present high-school organization. There need be little additional cost. No subject need be sacrificed to make room for the clinic. A change of emphasis to individual instruction instead of mass instruction is necessary as a first step in the remedial program.

The suggestions presented here will necessarily need to be revised and adapted to the programs of individual schools. The plans for organization and administration, no doubt, have many shortcomings which can be ironed out only by trial and experience. They are presented with the hope they may lend some little impetus to the better education of the individual pupil.

THE FIRST NUMBER OF "EDUCATIONAL TRENDS"

Another "Volume I, Number 1" has appeared in the realm of educational periodicals. The new publication bears the attractive name *Educational Trends* and the subtitle "A Journal of Research and Interpretation." It is issued by the School of Education of Northwestern University and, from portions of the announcement quoted in full here, may be understood to be an organ of that institution.

With this issue of *Educational Trends* the School of Education of Northwestern University offers its constituency a new educational publication. Three additional numbers will appear during the present school year.

The essential character of the publication is indicated by the subtitle, "A Journal of Research and Interpretation." Its purpose is to make available to those interested the results of significant researches carried on by members of the staff and those co-operating with them; and to suggest such conclusions or hypotheses on various educational problems as may seem timely.

Those responsible for the publication recognize the demand which is obviously becoming more insistent that increased attention be given to interpretations of educational theories and practices in terms of outcomes. This phase of educational emphasis will therefore receive attention in succeeding numbers.

Readers will probably agree that the present number has one virtue—its modest size. Comments and criticisms on other features of its form and content will be cordially welcomed.

This first number of *Educational Trends* is issued in inviting cover and format. The content is fully on a par with the attractive mechanical makeup. It is composed, for the most part, of a statement describing "The Present Issue" and of four articles by members of the staff and graduate students of the school: "Practices in Special Classes," "The Occurrence of Dependent Clauses in the Writing of School Children in Grades Four to Nine," "The Mental Status of 1,480 Crippled Children," and "The Social Code of 54 Graduate Students." The number closes with a note on "Educational Conferences" which have been sponsored by the School of Education at Northwestern University and items of "School News" in which are reported the activities of the staff of the school.

From the announcement that "Professor Paul A. Witty is editor of the present issue," we infer that the editorship may shift from one issue to another. The total number of issues each year is not specifically indicated, but the statement that "three additional numbers will appear during the present school year" encourages the belief that *Educational Trends* will be published at frequent intervals. The auspicious beginning represented in this first number and the strong staff in education at Northwestern University assure a vigorous life for this newcomer among the organs of university schools and departments of education.

SINGLE VERSUS DOUBLE PERIODS IN BOOKKEEPING

Over a long period one field of controversy in commercial education has been whether classes in bookkeeping should be scheduled for single or double periods. Although the issue referred to, partly

because the subject is one of those most frequently offered in high schools, readily lends itself to investigation, only recently has any-one undertaken to shift it from the realm of mere argument to that of objective inquiry. *Commercial Education*, a bulletin of the Whitewater State Teachers College, at Whitewater, Wisconsin, reports the summary of such an inquiry by Edward L. Cooper, of the State Teachers College at Albany, New York.

In an effort to throw light on the issue a comprehensive objective examination in bookkeeping, prepared by Professor Paul A. Carlson of the Whitewater State Teachers College, was administered in high schools in all sections of Wisconsin. Schools both with single-period and with double-period instruction in bookkeeping were represented. A part of the examination was administered to both groups of schools within definite time limits and the remainder with unlimited time for all subjects.

The evidence from the tests was applied to the following five comparisons: (1) comparison of the time-limit tests of the two groups of schools, (2) comparison of the tests given the two groups without time limits, (3) comparison of the time-limit tests when the schools were grouped according to the size of city, (4) comparison of the tests given without time limits when the schools were grouped according to the size of city, and (5) comparison of the tests when the two groups were controlled to eliminate the differences between textbooks used.

The brief conclusion from the comparisons is quoted in full. It is especially significant because more than half the teachers indicating a preference on the issue were favorable to the double-period plan. Here is another instance in which the results of investigation do not bear out prevalent belief.

The examination results indicate that the factor of single period or double period is not an important factor. In some tabulations the double-period schools are slightly better than the single-period schools. In other tabulations the single-period schools are slightly better than the double-period schools.

Since the double-period plan of instruction requires twice as much teaching time and twice as much use of equipment, the use of the double period is not justified. There is no evidence that the use of double-period instruction produces superior results.

CHILDREN'S READING INTERESTS AS RELATED TO SEX AND GRADE IN SCHOOL

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PURPOSE

In a recent issue of the *School Review* the writer reported the results of an investigation of adult reading interests carried on in Duluth, Minnesota.¹ The purpose of the study reported in this article is (1) to present data regarding the reading interests of 1,856 boys and girls in Duluth and (2) to point out both the similarities and the differences in the reading interests of these children and of the adults in the same city whose habits of reading were described in the previous article.

METHOD

In order that the results of this investigation might be comparable to those of the investigation of adult reading interests conducted in Duluth, the reading schedule used in the investigation of adults was used as the basis for an inquiry form which was given to the boys and girls taking part in the present study. Such changes as were made in the adult reading schedule were made for the purpose of eliminating expressions which might be difficult for children to understand.

Previous to the printing of the inquiry form, it was given in mimeographed form to 108 pupils in Grades V-X in the schools of Cambridge, Minnesota. Each teacher whose children filled in the mimeographed reading schedule reported the difficulties encountered and the questions raised by the pupils. After the investigators had made the changes which seemed advisable as a result of the experience of giving the form to these 108 pupils, the reading schedule was printed.

On December 3, 1929, the inquiry form was filled in by 1,856 chil-

¹ B. Lamar Johnson, "Adult Reading Interests as Related to Sex and Marital Status," *School Review*, XL (January, 1932), 33-43.

dren in Grades V-XI, inclusive, in Duluth. These children were pupils in nineteen different schools which were selected as representative of all sections of the city. The pupils filled in the forms under the direction of their classroom teachers. The fact that the information given would have no influence on the pupils' school records was emphasized, and, in reporting their reading, the pupils were instructed to include only reading which was not a part of their school work. The distribution, according to grade in school, of the pupils taking part in the study is given in Table I.

TABLE I
DISTRIBUTION, ACCORDING TO GRADE IN SCHOOL, OF 1,856
PUPILS ANSWERING INQUIRY FORM

Grade	Number of Boys	Number of Girls	Total
V.....	174	194	368
VI.....	168	224	392
VII.....	171	168	339
VIII.....	203	183	386
IX.....	97	92	189
X.....	62	101	163
XI.....	13	6	19
All grades.....	888	968	1,856

RESULTS

On the inquiry form which they filled in, the boys and girls were asked to indicate the amount of time they usually spend in newspaper and magazine reading and also to report the names of any books not connected with school work which they had read during the previous month. Table II shows that nearly 100 per cent of the boys and girls read newspapers and magazines and that 89 per cent of the group had read books during the month for which their reading is indicated. There appears to be no relation between sex and the number who read newspapers and magazines. The data indicate, however, that girls are somewhat more likely to read books than are boys.

Sex and grade in school have significant relations to the amount of time spent in reading magazines and newspapers, as is indicated in Table III. The boys reported spending approximately two and one-half hours a week in reading magazines; the girls, on the other

hand, reported spending less than two hours a week in this type of reading. Both boys and girls spend more time in magazine reading

TABLE II

PERCENTAGES OF 888 BOYS AND OF 968 GIRLS WHO READ BOOKS, MAGAZINES AND NEWSPAPERS DURING MONTH STUDIED

Grade	Number of Cases	Percentage Reading Books	Percentage Reading Magazines	Percentage Reading Newspapers
Boys:				
V-VI.....	342	85	97	99
VII-VIII.....	374	87	99	99
IX-XI.....	172	83	99	99
All boys.....	888	85	98	99
Girls:				
V-VI.....	418	92	96	99
VII-VIII.....	351	94	98	99
IX-XI.....	199	91	99	100
All girls.....	968	93	98	99
All boys and girls.....	1,856	89	98	99

TABLE III

MEDIAN AMOUNT OF TIME SPENT IN READING MAGAZINES AND NEWSPAPERS BY 1,856 BOYS AND GIRLS IN GRADES V-XI

Grade	Median Number of Minutes a Week Spent Reading Magazines	Median Number of Minutes a Day Spent Reading Newspapers
Boys:		
V-VI.....	149	36
VII-VIII.....	177	42
IX-XI.....	236	49
All boys.....	149	41
Girls:		
V-VI.....	64	29
VII-VIII.....	132	34
IX-XI.....	207	41
All girls.....	112	34
All boys and girls.....	134	37

as they advance in school; the pupils in Grades IX-XI reported spending over two hours a week more in magazine reading than the pupils in Grades V-VI. The time spent in reading newspapers re-

veals tendencies similar to those pointed out in the case of magazine reading. Boys spend more time in reading newspapers than do girls, and pupils in the upper grades spend more time in reading newspapers than do those in the lower grades.

Tables IV and V show that sex and grade in school apparently have much influence on the books that children read. The books

TABLE IV
BOOKS MOST OFTEN READ BY 888 BOYS IN GRADES V-XI DURING
THE MONTH BEFORE INQUIRY

Name of Book	Frequency of Mention	Name of Book	Frequency of Mention
Grades V-VI:		Grades IX-XI:	
Treasure Island.....	10	The Call of the Wild.....	8
Lance of Kanana.....	9	The Adventures of Huckle-	
Robinson Crusoe.....	8	berry Finn.....	4
Black Beauty.....	7	Riders of the Purple Sage...	4
Tom Swift.....	7	The Bishop Murder Case....	4
Bugle, a Dog of the Rockies..	6	Lone Star Ranger.....	3
Toby Tyler.....	6	Scouts of the Valley.....	3
The Adventures of Tom		U P Trail.....	3
Sawyer.....	5	Bar-20 Days.....	3
Arkansas Bear.....	5	Sea Hawk.....	3
We.....	5	The Young Trailers.....	3
Grades VII-VIII:		All grades:	
The Call of the Wild.....	17	The Call of the Wild.....	29
Tom Swift.....	14	Treasure Island.....	23
Treasure Island.....	11	Tom Swift.....	22
The Greene Murder Case....	9	The Adventures of Tom	
The Adventures of Tom		Sawyer.....	16
Sawyer.....	8	Robinson Crusoe.....	13
Kidnapped.....	6	The Adventures of Huckle-	
The Adventures of Huckle-		berry Finn.....	12
berry Finn.....	6	The Greene Murder Case....	12
Robinson Crusoe.....	5	We.....	11
Tarzan of the Apes.....	5	Lance of Kanana.....	9
We.....	5	Tarzan of the Apes.....	8
		Kidnapped.....	8
		The Bishop Murder Case....	8

most often read by the pupils in Grades V-VI make a list quite different from the list of the books most popular in Grades IX-XI. Stories of adventure were popular among the boys in all grades, and animal stories also ranked high in popularity. Mystery stories are not found among the ten books most often read by the boys in Grades V-VI. In Grades VII-XI, however, interest in the detective story is indicated by the frequency with which two of Van Dine's

books (*The Bishop Murder Case* and *The Greene Murder Case*) were reported to have been read.

The girls in all grades indicated an interest in books which are stories of home, of school, and of children. Typical of girls' favorite books are *Little Women*, *Heidi*, and *Anne of Green Gables*. Heading

TABLE V
BOOKS MOST OFTEN READ BY 968 GIRLS IN GRADES V-XI DURING
THE MONTH BEFORE INQUIRY

Name of Book	Frequency of Mention	Name of Book	Frequency of Mention
Grades V-VI:		Grades IX-XI:	
Little Women.....	26	Circular Staircase.....	10
Heidi.....	18	Girl of the Limberlost.....	8
Bobbsey Twins.....	16	Freckles.....	8
Clematis.....	12	Anne of Green Gables.....	7
Castaways of Pete's Patch...	11	The Virginian.....	6
Dandelion Cottage.....	10	The Harvester.....	5
Nobody's Girl.....	9	An Old-fashioned Girl.....	4
Anne of Green Gables.....	9	Marjorie Dean.....	4
Little Men.....	8	The Adventures of Oliver Twist.....	4
Pinocchio.....	8	Anne of Avonlea.....	4
Toby Tyler.....	8	Laddie.....	4
Grades VII-VIII:		Grey Room.....	4
Little Women.....	21	Tin Soldier.....	4
Anne of Green Gables.....	20	All grades:	
Little Men.....	13	Little Women.....	48
Mrs. Wiggs of the Cabbage Patch.....	12	Anne of Green Gables.....	36
An Old-fashioned Girl.....	10	Little Men.....	22
Girl of the Limberlost.....	8	Heidi.....	22
Boarded-up House.....	7	An Old-fashioned Girl.....	21
Circular Staircase.....	7	The Secret Garden.....	18
Edge of Raven Pool.....	7	Circular Staircase.....	18
Mother Carey's Chickens.....	7	Bobbsey Twins.....	17
Girl Next Door.....	7	Boarded-up House.....	17
The Secret Garden.....	7	Girl of the Limberlost.....	17

the list of books most often read by the girls in Grades IX-XI is, however, a detective story (*Circular Staircase*), and also included in this list is an adventure story (*The Virginian*) of the type which has great appeal for the boys. That boys and girls prefer fiction is indicated by the fact that only one non-fiction book (*We*) appears among the books most frequently read.

The lists of authors whose books were most read by the boys and the girls are given in Tables VI and VII. These lists indicate

differences in the reading interests of boys and girls similar to those suggested by the titles of the books read. Three writers of adventure stories—London, Altscheler, and Grey—are the authors whose books

TABLE VI

AUTHORS WHOSE BOOKS WERE MOST FREQUENTLY READ
BY 888 BOYS DURING THE MONTH BEFORE INQUIRY

Author	Frequency of Mention
London	38
Altscheler	35
Grey	34
Stevenson	31
Clemens	28
Appleton	26
Van Dine	23
Terhune	15
Defoe	13
Burroughs	11
Lindbergh	11

TABLE VII

AUTHORS WHOSE BOOKS WERE MOST FREQUENTLY READ
BY 968 GIRLS DURING THE MONTH BEFORE INQUIRY

Author	Frequency of Mention
Alcott	111
Seaman	57
G. S. Porter	46
Montgomery	45
Grey	43
Rankin	43
Spyri	26
Hope	25
Rinehart	25
Wiggin	24

the boys most often read. With the girls Alcott was the outstanding favorite. An interesting characteristic of the list of authors who were favorites among the boys and the girls taking part in this study is the inclusion on the list of authors whose books were popular among previous generations of boys and girls. Such authors as Defoe, Stevenson, Clemens, Alcott, and Wiggin were undoubtedly as popu-

lar among the parents of the children included in this study as they are among the boys and girls of today.

The names of the magazines read most frequently by the boys and girls are given in Tables VIII and IX. *Liberty* and the *Saturday Evening Post* led all other magazines in popularity with both the boys and the girls taking part in this study. Among the boys the *Ameri-*

TABLE VIII
MAGAZINES MOST OFTEN READ BY 888 BOYS IN GRADES V-XI

Magazine	Frequency of Mention	Magazine	Frequency of Mention
Grades V-VI:		Grades IX-XI:	
Liberty.....	105	Liberty.....	75
Saturday Evening Post.....	74	American Boy.....	67
Western Story Magazine.....	55	Saturday Evening Post.....	67
Boys' Life.....	51	Literary Digest.....	58
American Boy.....	38	Boys' Life.....	52
Collier's.....	35	Popular Mechanics.....	45
Popular Mechanics.....	35	Collier's.....	43
Ladies' Home Journal.....	34	Popular Science Monthly.....	42
Literary Digest.....	28	American Magazine.....	23
Detective Story Magazine.....	26	National Geographic Maga- zine.....	22
Grades VII-VIII:		All grades:	
American Boy.....	105	Liberty.....	281
Popular Mechanics.....	103	Saturday Evening Post.....	243
Saturday Evening Post.....	102	American Boy.....	210
Liberty.....	101	Boys' Life.....	193
Boys' Life.....	90	Popular Mechanics.....	183
Western Story Magazine.....	75	Western Story Magazine.....	151
Collier's.....	49	Collier's.....	127
American Magazine.....	46	Literary Digest.....	111
Popular Science Monthly.....	34	American Magazine.....	88
Detective Story Magazine.....	29	Popular Science Monthly.....	82

can Boy and Boys' Life ranked third and fourth, respectively. The interest which boys have in science is suggested by the popularity of *Popular Mechanics* and *Popular Science Monthly*, which are among the ten magazines most frequently read by the boys. The ten magazines most often reported by the girls include four magazines (*Ladies' Home Journal*, *Pictorial Review*, *Good Housekeeping*, and *Woman's Home Companion*) which are published particularly for women; none of these magazines is included among the periodicals which the boys most often read. On the whole, the magazines most often read by the boys and the girls are those which are published

for adults. Two of the ten magazines most popular with the boys are published especially for boys; the other eight periodicals are clearly published for the adult reading public. Only one of the ten magazines most often read by the girls is published particularly for girls; the remaining nine journals are intended for men and women. These data indicate the fact that boys and girls are reading the magazines

TABLE IX
MAGAZINES MOST OFTEN READ BY 968 GIRLS IN GRADES V-XI

Magazine	Frequency of Mention	Magazine	Frequency of Mention
Grades V-VI:		Grades IX-XI:	
Liberty.....	110	Saturday Evening Post.....	77
Pictorial Review.....	93	Ladies' Home Journal.....	74
Saturday Evening Post.....	74	Literary Digest.....	73
Ladies' Home Journal.....	63	Liberty.....	72
Child Life.....	53	Pictorial Review.....	67
Collier's.....	33	Good Housekeeping.....	48
Literary Digest.....	32	American Girl.....	44
Motion Picture Magazine.....	29	Collier's.....	44
Good Housekeeping.....	28	American Magazine.....	44
Woman's World.....	25	Woman's Home Companion..	38
Grades VII-VIII:		All grades:	
Saturday Evening Post.....	118	Liberty.....	283
Ladies' Home Journal.....	113	Saturday Evening Post.....	269
Liberty.....	101	Ladies' Home Journal.....	250
Pictorial Review.....	79	Pictorial Review.....	239
Collier's.....	60	Literary Digest.....	161
Literary Digest.....	56	Collier's.....	137
American Girl.....	55	Good Housekeeping.....	124
Good Housekeeping.....	48	American Girl.....	119
Woman's Home Companion..	40	American Magazine.....	103
American Magazine.....	38	Woman's Home Companion..	102
Photoplay.....	38		

which their parents are reading; they are not reading the magazines which are published for boys and girls. This situation raises two questions: (1) Do boys and girls have access to such juvenile magazines as are published? (2) Do boys and girls enjoy reading the juvenile magazines now being published?

Table X shows that the parts of magazines most often read by both boys and girls are the short stories and the joke sections. Continued stories and scientific articles rank third and fourth, respectively. The joke section is more popular among girls than among boys; scientific articles, on the other hand, are read by more boys

than girls. Travel articles are usually read by less than one-third of the boys and girls; advertisements and news articles are read by approximately one-fourth of those taking part in the study. Few (10 per cent or less) reported reading editorials, articles about politics, or articles about people who have succeeded. As the boys and girls advance in school, they become interested in subjects which formerly had little attraction for them. Scientific articles, travel articles, news articles, editorials, and political articles are more often

TABLE X
PERCENTAGES OF BOYS AND GIRLS IN GRADES V-XI WHO USUALLY
READ VARIOUS SECTIONS OF MAGAZINES

SECTIONS OF MAGAZINES	BOYS IN GRADES				GIRLS IN GRADES				BOYS AND GIRLS
	V-VI	VII-VIII	IX-XI	All Grades	V-VI	VII-VIII	IX-XI	All Grades	
Short stories.....	82	87	91	86	92	90	100	94	90
Humorous sections	84	76	82	80	97	93	86	94	87
Continued stories	54	52	65	58	44	59	86	59	59
Scientific articles..	28	49	72	46	12	13	34	17	31
Travel articles....	28	25	40	29	20	29	46	29	29
Advertisements...	18	24	38	25	26	22	31	25	25
News articles.....	23	20	38	25	19	24	36	25	25
Editorials.....	4	9	17	9	6	9	27	12	10
Articles about poli- tics.....	5	5	18	8	4	4	15	7	7
Articles about peo- ple who have succeeded.....	5	5	8	6	4	9	4	6	6

read by the boys and the girls in the higher grades than by those who are less advanced in school.

The comic section of the newspaper is usually read by 98 per cent of those taking part in this study, according to the data given in Table XI. Second only to the comic section in popularity is the front page, and third is the sports page. Sports news is read by approximately three-fourths of the boys and by slightly more than one-third of the girls. Over 40 per cent of those taking part in the study read the children's page, and puzzles are usually read by more than one-fourth of the boys and girls. Society news, advertisements, editorials, and the home page are sources of interest for comparatively small groups. The following parts of the paper are much more

popular among boys than among girls: the sports page, crime news, and national news. Girls, on the other hand, have a greater interest than have boys in the children's page, in puzzles, in advertisements, in society news, and in the home page. Interest in the children's page and in puzzles decreases as the pupils advance in school. As would be expected, this decline in interest is especially marked in the case of the children's page. Pupils in the higher grades are more interested than those in the lower grades in the following sections

TABLE XI
PERCENTAGES OF BOYS AND GIRLS WHO USUALLY READ
VARIOUS SECTIONS OF NEWSPAPERS

SECTIONS OF NEWSPAPERS	BOYS IN GRADES				GIRLS IN GRADES				BOYS AND GIRLS
	V-VI	VII-VIII	IX-XI	All Grades	V-VI	VII-VIII	IX-XI	All Grades	
Comic section . . .	98	92	97	96	99	100	100	99	98
Front page	72	72	95	77	59	72	91	70	73
Sports page	68	73	87	74	27	36	47	34	53
Children's page . . .	50	23	4	30	76	55	18	57	44
Accident news . . .	50	37	40	43	44	40	44	43	43
News of your city .	39	38	50	40	38	43	53	43	42
Crime news	46	47	40	45	23	21	34	24	34
Foreign news	40	24	32	32	30	28	33	30	31
News inside paper .	28	27	42	30	22	25	52	29	30
Puzzles	29	23	17	24	36	31	27	32	27
National news . . .	33	25	36	30	16	15	33	19	25
Society news	3	2	8	3	14	28	61	28	17
Advertisements . .	13	9	12	11	20	13	30	20	16
Editorials	6	11	27	12	7	10	26	13	13
Home page	2	1	1	1	7	7	10	8	5

of the newspaper: front page, sports page, news inside the paper, society news, and editorials. The increase in popularity of society news is particularly noteworthy among the girls. In Grades V-VI, 14 per cent of the girls reported that they usually read society news; in Grades IX-XI, news of social events is read by 61 per cent of the girls.

Thirty-seven per cent of the boys and girls, as shown in Table XII, stated that they secured the last books they had read from the public library, and 18 per cent indicated that the school library was the source of the last books read. In other words, 55 per cent of the last books read by those taking part in this study were obtained from libraries. Both "had book at home" and "borrowed

from a friend" were reported by 15 per cent of the group. Six per cent of the last books read were bought, and 6 per cent were gifts. The girls secured books from the public library more than the boys; the boys, on the other hand, borrowed books from friends more than the girls. In the lower grades there is a tendency to use the school library as a source of books more than in the upper grades. Pupils in the upper grades, however, reported getting books from the public library more often than did those who were less advanced in school. Borrowing books from friends was reported least frequently by pupils in Grades V-VI.

TABLE XII

PERCENTAGES OF BOYS AND GIRLS WHO SECURED THE LAST BOOKS
READ FROM VARIOUS SOURCES

SOURCE	BOYS IN GRADES				GIRLS IN GRADES				BOYS AND GIRLS
	V-VI	VII-VIII	IX-XI	All Grades	V-VI	VII-VIII	IX-XI	All Grades	
Public library.....	30	35	42	34	29	47	48	40	37
School library.....	24	13	12	17	31	13	7	19	18
Had it at home...	15	15	15	15	16	15	16	15	15
Borrowed from a friend.....	11	23	17	18	10	12	16	12	15
Purchased.....	9	7	8	8	6	6	3	5	6
Gift.....	8	5	5	6	5	5	4	5	6
Circulating library	2	1	1	1	3	1	5	3	2
Book club.....	1	1	0	1	0	1	1	1	1

The data given in Table XIII indicate no significant differences between the sexes with regard to methods of selecting books. The method most frequently reported by both the boys and the girls was the recommendation of friends. Seeing books at the public library and seeing them at the school library ranked second and third, respectively. Of much significance is the fact that "recommended by teacher" was one of the least frequently reported methods of choosing books. These facts can well be used in the teaching of literature; in encouraging reading, teachers can use the recommendations of their pupils to good advantage. "Saw book at school library" was mentioned more often by pupils in the lower grades than by those in the upper grades. "Knowledge of author," however, was reported more often by those in the upper grades.

Table XIV shows that over four-fifths of the boys and girls co-operating in this study reported that they use the public library.

TABLE XIII
PERCENTAGES OF BOYS AND GIRLS USING VARIOUS METHODS
OF SELECTING LAST BOOKS READ

METHOD OF SELECTION	BOYS IN GRADES				GIRLS IN GRADES				BOYS AND GIRLS
	V-VI	VII-VIII	IX-XI	All Grades	V-VI	VII-VIII	IX-XI	All Grades	
Recommended by friend.....	19	25	22	23	22	26	29	25	24
Saw book at public library.....	18	16	21	18	19	22	20	20	19
Saw book at school library.....	18	9	4	11	23	7	1	12	12
Convenience (had book at home)...	12	13	11	12	12	11	10	11	12
Subject of special interest.....	12	12	14	12	6	12	13	10	11
Knowledge of author.....	6	8	15	9	5	11	13	9	9
Recommended by teacher.....	4	6	5	5	4	3	4	4	4
Recommended by librarian.....	1	6	4	3	3	3	6	4	3
Saw book in a store	4	2	2	3	3	2	1	2	2
Saw book advertised.....	3	2	1	2	1	1	2	1	2
Heard book mentioned in a speech	3	1	1	2	2	2	1	2	2

TABLE XIV
PERCENTAGES OF 1,793 BOYS AND GIRLS WHO USE PUBLIC LIBRARY

Grade	Number Answering Question	Percentage Using Library	Percentage Not Using Library
Boys:			
V-VI.....	326	69	31
VII-VIII.....	355	84	16
IX-XI.....	171	93	7
All boys.....	852	80	20
Girls:			
V-VI.....	403	76	24
VII-VIII.....	343	92	8
IX-XI.....	195	95	5
All girls.....	941	86	14
All boys and girls.....	1,793	83	17

The data indicate a slight tendency for girls to use the public library more often than do boys. Among both boys and girls the percentages of those who use the public library increase consistently as the pupils advance in school. The two reasons most often given for not using the public library were: "I use the school library." "Public library is too far from home." These two answers include nearly 60 per cent of the reasons given for not using the public library. "Don't like to read" and "have books at home" were also mentioned as reasons for not using the public library.

SUMMARY

1. Approximately nine-tenths of the boys and girls taking part in this study reported reading books, and over 98 per cent of them read magazines and newspapers.

2. The girls reported reading books more than the boys, but the boys spend more time in reading magazines and newspapers than the girls.

3. The boys are most interested in adventure books; the girls prefer books about home, about school, and about children.

4. A number of the authors most popular among the boys and the girls are authors whose books were also favorites of children from thirty to fifty years ago.

5. The magazines which the children usually read are those which are published for adults; juvenile magazines rank comparatively low in popularity.

6. Differences in the reading interests of the boys and the girls are indicated by the sections of magazines and newspapers in which the children of the two sexes reported an interest.

7. Among both the boys and the girls the comic section is the most popular part of the newspaper.

8. The public library was reported to be the source of the last books read by 37 per cent of the boys and girls.

9. The recommendation of friends was the method of selecting the last books read by approximately one-fourth of those taking part in this study.

10. Pupils in the lower grades reported using the school library more than those in the upper grades; the latter, however, reported

using the public library more than the pupils who were less advanced in school.

11. Over 80 per cent of the boys and girls taking part in this study use the public library.

COMPARISON OF THE READING INTERESTS
OF CHILDREN AND ADULTS

1. Children read books much more often than adults. About one-fourth of the adults and nearly 90 per cent of the children read books during the month for which they reported their reading habits.

2. More children than adults reported reading magazines (81 per cent of the men and women compared with 98 per cent of the boys and girls). But little difference was found in the median amount of time which boys and men spend in reading magazines; the women, however, reported spending two hours and twenty-seven minutes a week in reading magazines, while the girls reported spending one hour and fifty-two minutes in reading magazines.

3. Both the children and the adults spend about thirty-five minutes a day in reading newspapers.

4. The titles of the books most frequently read indicate that the book reading of both children and adults is confined almost entirely to fiction. The men and the women prefer contemporary fiction; the boys and the girls, however, listed among their favorites such authors as Defoe, Stevenson, Alcott, and Clemens.

5. The lists of magazines most often read by men and women are similar to the lists of those most popular among boys and girls.

6. The reports of the sections of magazines and newspapers usually read indicate that in a number of cases boys prefer those features in which men are also much interested. Typical of the parts of magazines and newspapers in which boys and men are more interested than are girls and women are the following: scientific articles, sports news, and crime news. Both girls and women are more interested than boys and men, respectively, in short stories, continued stories, advertisements (in both magazines and newspapers), society news, the home page, and the children's page.

7. The recommendation of friends is the most important factor in selecting books among both children and adults.

8. More of the last books read by those taking part in this study (about 40 per cent of those read by both children and adults) come from the public library than from any other source. The school library is an important source of books for boys and girls but not for adults.

9. Children are users of the public library much more often than are adults.

CONCLUSIONS AND RECOMMENDATIONS

1. The large amount of magazine and newspaper reading on the part of both the children and the adults taking part in this study indicates a responsibility which the public school has failed thus far adequately to assume. The reading and literature courses in both the elementary and the secondary schools emphasize the reading of books; comparatively seldom is there found a course or a unit of a course the purpose of which is to guide the pupil in his reading of newspapers and magazines.

2. The fact that practically all the magazines most often read by children are intended for adults raises two questions: (1) Are there published in America suitable juvenile magazines which are interesting to boys and girls? (2) If such magazines are published, how can they be made more generally available to boys and girls? These questions demand extended study.

3. The public library is an important factor in the reading of both children and adults. This conclusion is indicated by the fact that the public library was mentioned as a source of the last books read by approximately 40 per cent of those who remembered where they had secured the last books they had read. Despite the evidence of commendable work on the part of the public library, this study presents data indicating that there is room for improvement in the service which it renders the community. Two-thirds of the men and the women taking part in this study make no use of the public library. To say that the public library should serve any arbitrary number or percentage of adults is unreasonable. It would seem, however, that the library should have much to offer to the large group of people who now make no contact with it.

4. Three-fourths of the adults who do not use the public library said that they had no time for reading or were not interested in

this occupation. Implied in the "no-time" reason is, in all probability, a lack of interest; for, if persons are actually interested in reading, they can undoubtedly find time to read and use the library. The findings of this study support a statement made by Gray and Munroe: "There is need of studies to determine methods and agencies through which increased interest in good books and other desirable types of literature may be secured most economically and effectively."¹ These investigators suggest book fairs and drives for better books as methods of advertising books.

Another possible means of encouraging the use of the library is the house-to-house visit by members of the library staff, who explain what the library is doing and what it offers its patrons. Such visiting has been done with apparent success in the districts of Duluth where the foreign-born population lives. A city-wide house-to-house campaign to inform citizens about the library and to invite them to use it would, no doubt, be productive of significant results. The value of such a campaign could be measured by a study of the use made of the library before and after the canvass. Plans of this nature might well be adopted by communities in which such measures are possible of execution in order that the public library may be brought to the attention of the large number of people who at present make no use of its facilities.

5. The method of choosing books most frequently mentioned by children is the recommendation of friends; teachers' recommendations, on the other hand, appear to have but little influence. These facts suggest that teachers who wish to encourage recreational reading can well utilize the recommendations of members of their classes concerning what they like to read.

¹ William S. Gray and Ruth Munroe, *The Reading Interests and Habits of Adults*, p. 266. New York: Macmillan Co., 1929.

THE EFFECT OF WORK-TYPE READING INSTRUCTION GIVEN IN THE NINTH GRADE

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Reading is one of the most important tools which pupils use. Elementary schools have been increasingly concerned with the teaching of work-type reading to enable pupils to secure knowledge from the printed page. However, when the pupils enter high school, formal practice in work-type reading usually ceases, and incidental practice is relied on to increase the reading ability of pupils.

The experiment which is reported in this article deals with the results of the use of work-type reading exercises in ninth-grade general science. The purpose of the experiment was to find the effect of sixty work-type reading exercises covering several units in the textbook on the pupil's reading comprehension score, on his knowledge of general science gained during the experiment, and on the grade-point averages of the experimental group. The results were measured by standardized tests, by an objective test covering the textbook material studied by both experimental and control pupils, and by grade-point averages for the first semester of the school year 1930-31.

The reading exercises aimed to develop the ability to comprehend written material such as is found in textbooks. One exercise was given each school day for sixty days to an experimental group of ninth-grade pupils equal in intelligence and reading ability to a group of control pupils. The measures of the abilities on which the equating was done were standardized tests.

The experiment was carried on in the high schools at Little Falls and Milaca, Minnesota. There were 206 pupils involved, 111 in the experimental group and 95 in the control group. During the first week of September, 1930, these pupils were tested with the Iowa Silent Reading Tests, Advanced Examination, Grades VII-XII, Form A; the Terman Group Test of Mental Ability, Grades VII-

XII, Form A; the Ruch-Popenoe General Science Test, Form A; the Gates Silent Reading Tests, Form 1, Types A, B, C, and D combined into a battery; the Iowa Academic Contest Examination in General Science, Test A, 1929; and an objective mimeographed test covering the material which was to be studied by both experimental and control pupils during the period of the experiment. Table I summarizes the initial scores on the tests used as the bases of matching. This table shows that the groups were very closely matched in reading ability and in intelligence. The experiment was

TABLE I
SUMMARY OF SCORES ON TWO TESTS USED TO MATCH CONTROL
AND EXPERIMENTAL GROUPS

Test	Mean Score	Standard Deviation	Difference in Mean Scores*	Probable Error of Difference	Difference Divided by Probable Error of Difference	Chances in 100 that Difference Is True Difference
Iowa Silent Reading Tests:						
Control group....	92.41 ± 2.01	29.09 ± 1.42	.....	.....	.....	.....
Experimental group.....	91.79 ± 1.97	30.83 ± 1.40	.....	.....	.....	.....
Comparison.....	.....	.....	-.62	2.81	.22	56
Terman Group Test of Mental Ability:						
Control group....	98.56 ± 0.81	11.70 ± 0.57	.....	.....	.....	.....
Experimental group.....	99.46 ± 0.74	11.50 ± 0.52	.....	.....	.....	.....
Comparison.....	.....	.....	.81	1.09	.74	69

* Negative differences are in favor of the control group.

begun on September 8, 1930, and was completed on December 12, 1930.

The course material used for both experimental and control groups in each school was the same. The same amount of time was used in recitation and study by both groups. The experimental group used the reading exercises based on their regular assignment. The control group studied the same assignment without these exercises. The sixty-minute class period was divided into two parts. The recitation and assignment occupied the first thirty minutes and study the last half of the period. The teachers were asked to present the material in the same way to both experimental and control classes and to prepare to ask the same questions in both classes.

The reading exercises used in this experiment were concentrated on three of the major skills involved in work-type reading: (1) comprehension, (2) organization, and (3) location of material. Thirty-one lessons given for the development of comprehension, twenty-three given for the development of ability to organize materials, and six given to develop the skill of locating material were prepared. The exercises in comprehension consisted principally in answering true-false and multiple-choice questions about the lesson which the pupils were studying. These questions were mimeographed and placed in the pupils' hands at the beginning of the study period. The exercises which were planned to develop organization ability were principally of two types. In the first type each pupil formed a question for each of five or six paragraphs in the daily lesson. These questions were compared, and the class chose the question which they considered best. As a variation of this device, the pupils may form a summary sentence for each of six or seven paragraphs in a lesson. Outlining was the second effective device which was used to teach the pupils to organize material and thus better to understand and remember it. This method was taught in three stages. The first stage was to arrange the steps in a process in order. For example, the steps in the production of steel, as described in a given textbook, may be: first, the mining of the ore; second, the smelting of the ore; third, the production of iron; and fourth, the changing of the iron to steel. In the second stage in the teaching of outlining, the pupils filled in a skeleton outline, and in the third stage they prepared their own outlines without a skeleton. The skill of locating material was developed through one device. Pupils were taught to use the index and the table of contents in order to answer questions about the textbook. For example, one question was "Does our textbook tell about the making of coke?" This summary of the procedure describes the main types of exercises used in this experiment. It is not claimed that these are the best of their types nor that better types cannot be produced. The experiment shows the results achieved with these particular exercises.

Before the experiment began, the pupils were told that the tests showed their need for instruction in work-type reading, that their deficiencies in this skill were not their fault, and that it was proposed to give them specific training which would remedy their deficiencies.

The kinds of exercises which they were to use were explained to them. They were told that these exercises should aid them materially in mastering general science and that the training should also be of value to them in all their regular classwork. The pupils were much interested in the plan and attacked the first lesson with enthusiasm. This attitude was maintained throughout the experiment.

The results of this experiment were treated in two ways. Gains on five tests from the initial to the final tests were computed for each pupil. The mean and the standard deviation of the gains of the experimental and the control groups on each test were found. The difference between the mean of the gain of the experimental group and the mean of the gain of the control group on each test was determined. The probable error of each observed difference was found by using the following formula.¹

$$PE_{(\text{diff.})} = \sqrt{PE^2_{(\text{av.1})} + PE^2_{(\text{av.2})}}$$

The difference between the means of the gains of the experimental group and the control group was then divided by this probable error of the difference. According to Garrett, if the quotient thus obtained is four or greater, the results may be considered completely reliable, as chance could not account for the difference.² If the quotient is four and the experiment were tried a large number of times, the difference between the means would be greater than zero 9,970 times in 10,000 and would be in favor of the group for which it occurred in the experiment.

The second treatment consisted in finding the multiple coefficient of correlation between each of the final measures and the bases of matching and then using this multiple coefficient of correlation in the following formula developed by Lindquist for finding the standard error of a difference between matched groups.³

$$\sigma_{\text{diff.}} = \sqrt{\left(\frac{\sigma_1^2}{N_1} + \frac{\sigma_2^2}{N_2}\right) (1 - r^2)}$$

¹ Henry E. Garrett, *Statistics in Psychology and Education*, p. 133. New York: Longmans, Green & Co., 1926.

² *Ibid.*, p. 136.

³ E. F. Lindquist, "The Significance of a Difference between 'Matched' Groups," *Journal of Educational Psychology*, XXII (March, 1931), 202.

This formula is used because the regular formula is based on the supposition that the measures on which the significance is computed are uncorrelated. This formula considers the correlation between the initial measures and the gains on which the comparisons are made.

The conclusions are based on the means of the gains in score made by each group from the initial to the final tests on the following measures: (1) the Gates Silent Reading Tests, Form 2, Types A, B, C, and D combined into a battery (midtest); (2) Iowa Silent Reading Tests, Advanced Examination, Form A; (3) the Gates Silent Reading Tests, Form 1, Types A, B, C, and D combined into a battery; (4) the Iowa Academic Contest Examination in General Science, Test A, 1929; (5) the Ruch-Popenoe General Science Test, Form A; (6) the mimeographed test in general science (prepared by the writer) covering the material studied in the textbook by both experimental and control pupils during the experiment. In addition, the grade-point averages of the experimental group compared with those of the control group were used as a basis of conclusion.

After thirty-five of the reading lessons had been taught in the experimental group and the corresponding general-science material had been presented to the control group without the reading lessons, all pupils involved in the experiment were tested with the Gates Silent Reading Tests, Form 2, Types A, B, C, and D. This test was combined into a battery by adding the totals of the correct scores in Types A, B, and C to one-half the score on Type D. A summary of the gains in this midtest and in the tests given at the end of the experiment is given in Table II. On Form 2 of the Gates Silent Reading Tests (the midtest), the difference in favor of the control group divided by the probable error of the difference is .93. This difference is so slight that it should be considered of little significance. It seems reasonable to say, then, that the reading lessons had not been of any marked aid or hindrance to the experimental group at approximately the midpoint of the experiment.

The difference in favor of the experimental group on the Iowa Silent Reading Tests divided by the probable error of the difference is 2.43. This figure approaches, but does not reach, the requirement for statistical significance. When the formula for finding the sig-

nificance of the difference between matched groups is used, the quotient is raised but still does not reach the requirement for statistical significance. Both groups had a mean initial reading score of

TABLE II
SUMMARY OF GAINS IN SCORES MADE BY TWO GROUPS IN ALL TESTS
AND IN GRADE-POINT AVERAGES

TEST	MEAN GAIN	STANDARD DEVIATION	DIFFERENCE IN MEAN GAINS	PROBABLE ERROR OF DIFFERENCE		DIFFERENCE DIVIDED BY PROBABLE ERROR OF DIFFERENCE		CHANCES IN 100 THAT DIFFERENCE IS TRUE DIFFERENCE	
				Garrett Formula	Lindquist Formula	Garrett Formula	Lindquist Formula	Garrett Formula	Lindquist Formula
Gates Silent Reading Tests, Form 2 (midtest):									
Control group.....	77.64 ± 0.08	14.10 ± 0.69	.....					
Experimental group.....	76.64 ± 0.02	14.37 ± 0.05	.....					
Comparison*.....			-1.25	1.34	.91	-.93	-1.37	74	82
Iowa Silent Reading Tests:									
Control group.....	48.83 ± 1.38	19.92 ± 0.98	.....					
Experimental group.....	53.47 ± 1.32	20.65 ± 0.93	.....					
Comparison.....			4.64	1.91	1.83	2.43	2.54	95	96
Gates Silent Reading Tests, Form 1:									
Control group.....	14.28 ± 0.63	9.11 ± 0.45	.....					
Experimental group.....	15.10 ± 0.62	9.76 ± 0.44	.....					
Comparison.....			.82	.88	.81	.93	1.01	74	75
Iowa Academic Contest Examination in General Science:									
Control group.....	21.80 ± 0.65	9.46 ± 0.46	.....					
Experimental group.....	28.66 ± 0.79	12.31 ± 0.56	.....					
Comparison.....			4.86	1.02	1.01	4.76	4.81	100	100
Ruch-Popenoe General Science Test:									
Control group.....	6.06 ± 0.27	3.92 ± 0.19	.....					
Experimental group.....	8.48 ± 0.31	4.89 ± 0.22	.....					
Comparison.....			2.42	.41	.41	5.90	5.90	100	100
Mimeographed general-science test:									
Control group.....	74.81 ± 1.47	21.24 ± 1.08	.....					
Experimental group.....	82.52 ± 1.08	16.86 ± 0.76	.....					
Comparison.....			7.71	1.82	1.77	4.24	4.36	100	100
Grade-point average:†									
Control group.....	1.96 ± 0.07	1.01 ± 0.05	.....					
Experimental group.....	2.10 ± 0.05	0.85 ± 0.04	.....					
Comparison.....			.14	.09	.09	1.56	1.56	85	85

* Negative differences are in favor of the control group.

† The figures for this item represent the mean of the grade-point averages for the semester, not the mean of the gains.

approximately 92, or a grade level of 7.0, at the start of the experiment. At the end of the experiment the mean final score of the experimental group was 135.2, or a grade level of 9.8, and that of the control group was 130.2, or a grade level of 9.4. The difference in gains, in a period of twelve weeks, is 0.4 of a grade in favor of the experimental group.

The difference of the gains on the Gates Silent Reading Tests, Form 1, divided by the probable error of the difference is so slight as to warrant the statement that there is practically no difference between the groups. When the formula for matched groups is used, these differences are so slightly changed as to be negligible.

The results of three reading tests may be summarized in the statement that the superiority of the control group at the midpoint of the experiment is so slight as to be negligible. The superiority of the experimental group on the Gates Silent Reading Tests at the end of the experiment is also insignificant. The gain in favor of the experimental group on the Iowa Silent Reading Tests is large but does not reach the requirement of statistical certainty.

On all three general-science tests the gains in favor of the experimental group are statistically significant both when the group is treated as a random sample and when the formula for matched groups is applied. When knowledge of the subject matter studied during the period of the experiment is used as the standard of judgment, there is no doubt that the reading exercises used in the experiment were of great value to the pupils who used them.

The difference in grade-point averages shown in Table II is in favor of the experimental group, but it is not statistically significant, since it is only 1.56 times as large as the probable error of the difference. Although the reading lessons seemed to improve the semester marks of the pupils in the experimental group, this result may have occurred by chance.

Of the seven final measures, six are in favor of the experimental group and one in favor of the control group. The one difference in favor of the control group is so slight that no significance should be attached to it. Of the six differences in favor of the experimental group, three are statistically significant and one closely approaches statistical significance.

BENEFITS DERIVED BY INITIAL GOOD AND POOR READERS

In addition to the investigations already described, it was decided to compare the gains of the low and high experimental sections with their matched control sections and to show how the gains for these sections compared with the gains for the entire group. It was arbitrarily decided that an initial comprehension score of 90 or less in the

Iowa Silent Reading Tests should place a pupil in the low section, and a score of 90.5 or more should place a pupil in the high section, since this score divided the pupils into sections of a more nearly even size than any other score which could be chosen. A summary of these data is given in Table III.

In the case of the Iowa Silent Reading Tests, the data show that the difference between the mean gain of the low experimental section and the mean gain of the low control section is about twice as large as the difference between the mean gain of the total experimental

TABLE III
SUMMARY OF DIFFERENCES IN MEAN GAINS OF EXPERIMENTAL AND CONTROL GROUPS AND OF LOW AND HIGH SECTIONS OF BOTH GROUPS*

Test	Difference in Mean Gains of Total Experimental Group and Total Control Group	Difference in Mean Gains of Low Experimental Section and Low Control Section	Difference in Mean Gains of High Experimental Section and High Control Section
Iowa Silent Reading Tests.....	4.60	9.77	-1.25
Iowa Academic Contest Examination in General Science.....	4.86	6.90	2.58
Ruch-Popenoe General Science Test.....	2.42	2.71	2.31
Mimeographed general-science test.....	7.71	10.21	4.90
Gates Silent Reading Tests, Form 1.....	.82	1.65	-.24
Grade-point average.....	.13	.05	.24
Gates Silent Reading Tests, Form 2.....	-.93	-1.20	-1.14

* Negative differences are in favor of the control group.

group and the mean gain of the total control group. From these data it is clear that, so far as the Iowa Silent Reading Tests are concerned, the work carried on in the experiment was exceedingly beneficial for poor initial readers.

The mean gains in scores from initial to final tests on the Gates Silent Reading Tests, Form 1, in general follow the same pattern as do the results on the Iowa Silent Reading Tests.

On the three general-science tests the low section of the experimental group gained about twice as much as the high section. The gain of the low experimental section is considerably larger than the gain of the entire experimental group. The reading lessons were much more beneficial for poor initial than for good initial readers when the results are measured by three general-science tests.

The difference in the means of grade-point averages for the high and low sections of the experimental and control groups is consistently in favor of the experimental section. It is clear that the high experimental section achieved more in comparison with its control section than did the low experimental section. On six of the seven final measures the experimental group surpassed the control group. On five of these the low experimental section exceeded the gain of the whole experimental group by a considerable margin. In the other measure it exceeded the control group but not to the same extent as did the total experimental group.

Since the gains of the entire experimental group were in several cases statistically significant and since the gains for the low experimental group were usually larger than those of the entire group, the data show that the experimental procedure was of great value to poor initial readers. The data show neither that the experimental procedure was definitely superior for good initial readers nor that the procedure was harmful to them.

CONCLUSIONS AND IMPLICATIONS

The following conclusions and implications are warranted by the data which have been presented. (1) Reading lessons given in general science produce superior knowledge of general science to an extent which cannot be explained by chance. (2) Reading lessons given in general science have a beneficial effect on the general scholastic achievement of ninth-grade pupils. (3) Reading lessons of the type used in this experiment are more beneficial to poor initial readers than to good initial readers. (4) A considerable proportion of the pupils in ninth-grade classes will profit from such instruction as has been described in this article. It seems reasonable to assume that pupils in the other grades of the junior and senior high school will also profit from reading instruction.

TEXTBOOK TRENDS IN PLANE GEOMETRY

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RECURRENT CRITICISMS OF PLANE GEOMETRY

A search through many articles in books and periodicals published in this country and in England in the period from the beginning of the century to about 1925 reveals abundant criticisms against prevailing practices in the teaching of geometry and in the construction of the textbooks in this study. The subjects of these criticisms, with the recommendations offered for improvement in each case, may be classified and summarized as follows:

1. *The practice of plunging the beginner into demonstrative geometry without first establishing a concrete basis.*—The remedies suggested are the provision of a long introduction including much measurement, computation, instrumental drawing, quantitative proof, graphing, informal discussions, concrete illustrations from pupils' own experiences, and analysis of concrete situations.
2. *Passing from one abstract principle to another with no immediate application of each principle.*—Critics advise that each new truth be followed by its application in many problems, computational solutions when possible, and concrete situations if any exist.
3. *Unreasonable emphasis on strict logic and scientific rigor.*—A course intelligible from the pupil's point of view is recommended, many truths the proof of which the pupil is not capable of understanding being assumed.
4. *Lack of emphasis on training in logical thinking.*—The pupil must be confronted by dilemmas. Definitions, deductions, and demonstrations should be secured as a result of the pupils' own activity. The "ready-made" proof and the Euclidean logical chain do not train in logical thinking.
5. *The isolation of geometry from other branches of mathematics and from other sciences.*—Some would make no division between mathe-

matics and other sciences, others advocate a correlation of all mathematical subjects, and a third group recommend merely incorporating into the course in plane geometry topics from arithmetic, algebra, trigonometry, analytic geometry, solid geometry, and the calculus.

6. *Lack of attention to individual differences among high-school pupils.*—The most common device recommended to provide for individual differences is the provision of a maximum and a minimum course.

7. *Failure to construct textbooks on psychological principles.*—Reforms advocated for a more scientific construction of textbooks repeat those offered under all the foregoing criticisms.

To discover the extent to which the changes recommended by the critics have been incorporated into the textbooks in plane geometry, the writer made a study of the textbooks in use before reform movements became prevalent and of textbooks representative of later periods. The first group of textbooks analyzed consisted of ten *early* books chosen, so far as possible, from those widely used in this country from 1896 to 1901; the second group was made up of ten representative textbooks in *current* use at the time the analysis was made (1928); and a third group was composed of five *recent* textbooks published after 1925. All the books in the second group were published before those in the third group, which on this account were not yet in as frequent use at the time of making the analysis. Certain of the books in the second group are revisions of books in the first, and, again, certain of those in the third group are revisions of books in the second group.

The content of the books was distributed under the following five main groups: (1) prefatory materials and the organization of the larger divisions of the subject; (2) the number, nature, and presentation of the logical elements and the material and features related to these elements; (3) the original exercises with their related materials; (4) miscellaneous content; and (5) introductory and optional material.

In the following résumé of the study the logical elements and the original exercises are given prominence. For these only will any considerable amount of evidence be presented. The other groups will, however, first be briefly treated.

ORGANIZATION OF THE COURSE AND INTRODUCTORY
AND OPTIONAL MATERIAL

Close agreement exists in all groups of textbooks in the order of the introduction of the larger divisions of content, but the sequence of propositions within these divisions varies, especially in current and recent books. In the recent textbooks fundamental constructions more often follow the theorems on which they depend; in the early books these constructions are usually grouped at the end of books, or chapters.

The introductory chapter is intended by current and recent writers to prepare the pupil in an informal and interesting way for the later demonstrative geometry. The precise definition gives place to informal exposition, often followed by exercises; construction work is part of the preliminary course in most current textbooks and in all but one recent book; this first course has been greatly lengthened in current books; and the tendency in recent books is toward further lengthening. Early authors made the introductory chapter a formal outline of the science, usually very brief.

Optional material in the body of the textbook appears in three-fifths of the current and recent books. This material usually consists in additional theorems, problems, and exercises. A few textbooks introduce topics from algebra, trigonometry, and practical applications. No early textbook includes optional material in the body of the book.

MISCELLANEOUS CONTENT

Although the logical elements and the exercises comprise most of the course in plane geometry as represented in the textbook, there are certain miscellaneous materials that deserve consideration. A summary of the changes with respect to these materials follows. (1) Current and recent textbooks give successively increasing emphasis to geometric instruments and their use. (2) Values to be gained from a study of geometry are pointed out more often in current and recent textbooks than in earlier books. (3) Formulas are more frequently derived and summarized in the current and recent textbooks. (4) Notes to pupils and teachers and historical notes are more numerous. (5) Symbols and abbreviations receive more gen-

eral use. (6) Tables of various kinds are more often included. (7) Illustrations of all kinds are more freely used. (8) Topics from other branches of mathematics are not usual in any of the groups of textbooks, but recent books show a tendency to incorporate more of these. (9) Long expositions on laws and principles are more numerous in early textbooks, while current and recent textbooks more often include topics dealing with practical applications of geometric principles. (10) Current and recent textbooks, in general, use simpler language and a less formal style than early textbooks. (11) Varied typography, the parallel form of presenting theorems, schematic forms for summaries, and indexes are more common features of cur-

TABLE I
AVERAGE NUMBER OF LOGICAL ELEMENTS IN
EACH GROUP OF TEXTBOOKS
IN PLANE GEOMETRY

Element	Early Textbooks	Current Textbooks	Recent Textbooks
Definitions	180.5	180.3	157.3
Assumptions	18.6	36.1	39.6
Theorems	124.4	100.5	85.2
Problems	36.8	30.4	27.4
Corollaries	100.2	81.2	69.0

rent and recent textbooks. (12) The number of authors who at the time of writing textbooks in plane geometry were engaged in secondary education is smaller in the case of writers of the early textbooks than in the case of writers of the current and the recent textbooks.

LOGICAL ELEMENTS

Since it is a commonplace that plane geometry has long consisted for the most part in logical deductions, consideration of these is important. The following analysis of the logical elements includes definitions, assumptions, theorems, corollaries, and problems. Table I shows the distribution of these according to the average number of each in the three groups of textbooks.

"Definitions" as used here indicates formal or informal definitions or explanations of terms even though not called definitions by the author. A considerable decrease is shown from current to recent

textbooks in the number of terms defined. "Assumptions" are all truths designated by the author as axioms, postulates, assumptions, or theorems which are assumed without proof. Current and recent textbooks have doubled the number of assumptions. "Theorems" are counted such if they are numbered as fundamental and are called theorems by the author. A successive decrease is shown from early to recent textbooks in the number of theorems. "Problems" are constructions to be made with certain given conditions. A slight decrease in the number of problems is shown in the recent textbooks. "Corollaries" are counted as such if they are so designated by the author. An appreciable decrease is apparent in current and recent textbooks in the number of corollaries.

TREATMENT OF THEOREMS AND PROBLEMS

In the comparison of authors' prefaces it is found that little agreement in the method of presenting theorems and problems exists among early and current writers of textbooks. An examination of the books corroborates this disagreement forecast by the prefaces. In the analysis of this phase of the books theorems and problems have been divided into four classifications. The distribution of the theorems is given in Table II. "Complete proofs" as classified in this table are theorems followed by a complete synthetic proof including all, or most, of the reasons. Though no unanimous agreement appears between the books of any group, writers of early books, on the average, emphasized this method of treatment decidedly more than writers of current and recent books. "Incomplete proofs" are theorems followed by all the argument and less than half, or none, of the reasons. These gained favor in current textbooks, but from current to recent books decreases in the average numbers and in the percentages are shown. "Unproved theorems" are those in which the pupil must supply both argument and reasons. Theorems of this class are more numerous in current textbooks and in recent books. The "analytic treatment" consists in a statement of the theorem preceded or followed by an analysis which aims to draw the proof from the pupil. This method seems to have been unknown to writers of early textbooks. One current book (Textbook Q) uses analysis to an appreciable extent, and two recent books make this the usual treatment throughout.

The classification and method of analysis used for the problems were the same as those used for the theorems. Only the averages for

TABLE II
NUMBER AND PERCENTAGE OF THEOREMS IN EACH OF FOUR
CLASSIFICATIONS IN TWENTY-FIVE TEXTBOOKS
IN PLANE GEOMETRY

TEXTBOOK	COMPLETE PROOFS		INCOMPLETE PROOFS		UNPROVED		ANALYTIC TREATMENT		TOTAL	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Early:										
A.....	128	97.7	0	0.0	3	2.3	0	0.0	131	100.0
B.....	101	79.5	23	18.1	3	2.4	0	0.0	127	100.0
C.....	121	100.0	0	0.0	0	0.0	0	0.0	121	100.0
D.....	130	94.2	7	5.1	1	0.7	0	0.0	138	100.0
E.....	106	92.1	7	6.1	2	1.8	0	0.0	115	100.0
F.....	30	27.3	73	66.4	7	6.3	0	0.0	110	100.0
G.....	111	96.6	2	1.7	2	1.7	0	0.0	115	100.0
H.....	111	100.0	0	0.0	0	0.0	0	0.0	111	100.0
I.....	115	100.0	0	0.0	0	0.0	0	0.0	115	100.0
J.....	160	99.4	0	0.0	1	0.6	0	0.0	161	100.0
Average	111.3	89.5	11.2	9.0	1.9	1.5	0	0.0	124.4	100.0
Current:										
K.....	78	95.1	2	2.4	2	2.4	0	0.0	82	99.9
L.....	51	45.5	44	39.3	17	15.2	0	0.0	112	100.0
M.....	100	100.0	0	0.0	0	0.0	0	0.0	100	100.0
N.....	87	90.6	2	2.1	7	7.3	0	0.0	96	100.0
O.....	79	71.2	30	27.0	2	1.8	0	0.0	111	100.0
P.....	80	86.0	10	10.8	3	3.2	0	0.0	93	100.0
Q.....	43	39.1	37	33.6	11	10.0	10	17.3	110	100.0
R.....	51	60.0	27	31.8	7	8.2	0	0.0	85	100.0
S.....	74	65.5	32	28.3	0	5.3	1	0.9	113	100.0
T.....	79	76.7	15	14.6	9	8.7	0	0.0	103	100.0
Average	72.2	71.8	19.9	19.8	6.4	6.4	2.0	2.6	100.5	100.0
Recent:										
U.....	50	49.5	34	33.7	17	16.8	0	0.0	101	100.0
V.....	14	19.2	0	8.2	10	13.7	43	58.9	73	100.0
W.....	60	88.2	5	7.4	3	4.4	0	0.0	68	100.0
X.....	28	28.0	22	22.0	49	49.0	1	1.0	100	100.0
Y.....	11	13.1	0	0.0	16	19.0	57	67.9	84	100.0
Average	32.6	38.3	13.4	15.7	19.0	22.3	20.2	23.7	85.2	100.0

the three groups are presented in Table III. These averages show much the same results as were shown in the case of theorems—successive decreases in the number of complete solutions and in-

creases in the number of incomplete solutions, unsolved problems, and analytic treatments.

EXERCISES

The criticisms already mentioned show that many objections to prevailing practices centered in the lack of emphasis placed on original work on the part of the pupils. Textbooks were criticized for the meagerness of opportunity offered pupils to make their own definitions, deductions, and demonstrations. To compare the opportunities for original discovery offered in early, current, and recent textbooks, the writer made a study of the number, distribution, and nature of the exercises included. "Exercises" as here used indicates

TABLE III
AVERAGE NUMBER AND PERCENTAGE OF EACH OF FOUR TYPES OF PROBLEMS
APPEARING IN THREE GROUPS OF TEXTBOOKS IN PLANE GEOMETRY

TYPE OF PROBLEM	EARLY TEXTBOOKS		CURRENT TEXTBOOKS		RECENT TEXTBOOKS	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Complete solution.....	29.2	79.4	20.3	66.8	10.2	37.2
Incomplete solution.....	6.3	17.1	6.9	22.7	8.8	32.1
Unsolved.....	1.3	3.5	3.1	10.2	5.6	20.4
Analytic.....	0.0	0.0	0.1	0.3	2.8	10.2

material designated "exercises" or "questions" by the author and any directions apparently intended to be carried out by the pupil.

Exercises grouped by position and purpose.—It has been shown that not only the kinds of exercises and their numbers are important but that their position in the textbook is also important. Hence a classification of all exercises according to their position and purpose in the textbooks has been made, and the result is shown in Table IV.

"Developmental exercises" as classified in this table are those that precede definitions, theorems, etc., and that aim to prepare the learner's mind for the principle which follows. This type of exercise is seen to be uncommon in early textbooks. Most current books offer a few such exercises, but in only one book (Textbook P) are these set apart from the other exercises and labeled as developmental material. Textbook X in the recent group gives particular emphasis to these exercises. "Exercises for immediate application" are exer-

cises which follow immediately the principle on which they are based. This group stands out in current and recent books as the

TABLE IV

DISTRIBUTION OF EXERCISES IN TWENTY-FIVE TEXTBOOKS IN PLANE
GEOMETRY ACCORDING TO POSITION AND PURPOSE

TEXTBOOK	DEVELOPMENTAL EXERCISES		EXERCISES FOR IMMEDIATE APPLICATION		EXERCISES FOR REVIEW AND FURTHER APPLICATION		SUPPLEMENTARY EXERCISES		TOTAL	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Early:										
A.....	0	0.0	118	18.2	530	81.8	0	0.0	648	100.0
B.....	0	0.0	154	27.9	294	53.3	104	18.8	552	100.0
C.....	0	0.0	0	0.0	0	0.0	281	100.0	281	100.0
D.....	25	2.8	340	37.4	405	44.6	138	15.2	908	100.0
E.....	0	0.0	38	8.6	230	52.2	173	39.2	441	100.0
F.....	0	0.0	437	62.8	259	37.2	0	0.0	696	100.0
G.....	0	0.0	444	86.9	67	13.1	0	0.0	511	100.0
H.....	0	0.0	0	0.0	0	0.0	134	100.0	134	100.0
I.....	0	0.0	104	47.7	0	0.0	114	52.3	218	100.0
J.....	0	0.0	12	8.9	123	91.1	0	0.0	135	100.0
Aver- age..	2.5	0.5	164.7	36.4	190.8	42.2	94.4	20.9	452.4	100.0
Current:										
K.....	5	0.4	804	64.2	291	23.3	152	12.1	1,252	100.0
L.....	38	2.7	928	65.7	90	6.4	357	25.2	1,413	100.0
M.....	0	0.0	612	62.1	311	31.6	62	6.3	985	100.0
N.....	122	6.1	1,075	53.3	673	33.4	146	7.2	2,016	100.0
O.....	18	1.7	817	78.8	202	19.5	0	0.0	1,037	100.0
P.....	81	9.5	519	60.7	188	22.0	67	7.8	855	100.0
Q.....	10	0.8	1,057	85.4	170	13.8	0	0.0	1,237	100.0
R.....	13	1.3	723	69.9	298	28.8	0	0.0	1,034	100.0
S.....	8	0.8	630	59.5	420	39.7	0	0.0	1,058	100.0
T.....	9	0.7	908	68.6	324	24.5	83	6.2	1,324	100.0
Aver- age..	30.4	2.5	807.3	66.1	296.7	24.3	86.7	7.1	1,221.1	100.0
Recent:										
U.....	36	1.8	1,170	59.8	225	11.5	527	26.9	1,958	100.0
V.....	36	2.5	929	63.8	305	20.9	186	12.8	1,456	100.0
W.....	12	0.9	1,011	76.2	192	14.5	112	8.4	1,327	100.0
X.....	330	15.4	1,369	64.0	440	20.6	0	0.0	2,139	100.0
Y.....	62	3.1	1,147	57.8	639	32.1	140	7.0	1,988	100.0
Aver- age..	95.2	5.4	1,125.2	63.4	360.2	20.3	193.0	10.9	1,773.6	100.0

most usual. "Exercises for review and further application" are exercises that are grouped at the close of chapters or at the close of the

various books. These exercises find greatest favor in the early books. The percentage of exercises of this type appearing in these books is approximately twice the corresponding percentage in current and recent books. Current and recent textbooks indicate that the purpose of these exercises is to furnish reviews and tests, while the early textbooks intend such material to be used in further applications. "Supplementary exercises" are those that have been collected at the end of the book. These may be in an appendix or may be designated as optional. Exercises of this kind seem to have decreased in importance, on the average, in current and recent textbooks. However, extremes of emphasis are found. The fact should be mentioned that the recent textbooks showing the highest percentages of exercises of this type include a device of "cross-references," which makes it possible to use most of the exercises in the appendix for immediate application throughout the book. The sum of the four preceding classifications makes up the total shown in the last columns of Table IV. In average total numbers of exercises, there have been successive increases from early to recent textbooks.

Exercises grouped on the basis of their nature.—A count of the various kinds of exercises was also made. The first grouping is divided into five classes. The average number and percentage of the exercises in each class is shown in Table V.

"Proofs" are exercises requiring geometric proof. Current textbooks place little more than half the emphasis given by early books on this type of exercise. The tendency in recent books seems to be to decrease further the importance of the purely geometric exercise. A difference exists, also, in the manner of stating these exercises in many of the recent textbooks. With few exceptions early textbooks use the formal expression of a theorem, while recent books often use the question. One recent book states as many as three-fourths of the exercises in this group in question form. "Constructions" are exercises demanding the use of ruler and compass only. The average percentages of these exercises show successive decreases in current and recent textbooks. "Computations" are exercises solved by arithmetic, algebra, or trigonometry. These show successive increases, both in numbers and average percentages, in current and recent textbooks. "Loci" are exercises in finding loci. These seem to have

decreased slightly in importance in recent textbooks. "Miscellaneous exercises" include review questions, drawing exercises, and any other exercises that cannot be classified with the preceding types. Early textbooks attach small importance to exercises of this type. The decrease in number and percentage of these exercises from current to recent books is accounted for by the very great increase given in these books to the computational group.

TABLE V

AVERAGE NUMBER AND PERCENTAGE OF EACH OF FOUR TYPES OF EXERCISES
APPEARING IN THREE GROUPS OF TEXTBOOKS
IN PLANE GEOMETRY

TYPE OF EXERCISE	EARLY TEXTBOOKS		CURRENT TEXTBOOKS		RECENT TEXTBOOKS	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Proofs.....	200.1	44.2	344.5	28.2	481.8	27.2
Constructions.....	90.7	20.0	188.5	15.4	239.2	13.5
Computations.....	108.7	24.0	338.7	27.7	710.2	40.0
Loci.....	17.2	3.8	38.9	3.2	47.4	2.7
Miscellaneous exercises.....	35.7	7.9	310.5	25.4	295.0	16.6

TABLE VI

AVERAGE NUMBER AND PERCENTAGE OF ARITHMETIC, ALGEBRAIC, TRIGONOMETRIC AND CONCRETE EXERCISES APPEARING IN THREE GROUPS
OF TEXTBOOKS IN PLANE GEOMETRY

TYPE OF EXERCISE	EARLY TEXTBOOKS		CURRENT TEXTBOOKS		RECENT TEXTBOOKS	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Arithmetic.....	65.3	14.4	199.7	16.4	350.4	19.8
Algebraic.....	43.4	9.6	125.5	10.3	323.6	18.2
Trigonometric.....	0.0	0.0	13.5	1.1	36.2	2.0
Concrete application.....	7.7	1.7	122.1	10.0	132.4	7.5

Second grouping on the basis of the nature of the exercises.—The second grouping of exercises according to their nature is shown in Table VI. "Arithmetic exercises" are all computational exercises that are not algebraic in nature. The analysis shows successive increases in average numbers and percentages of these exercises. Algebraic exercises show slight increases in average percentages but considerable increases in average numbers in current textbooks.

The increases are marked in recent textbooks, both in numbers and percentages. Trigonometric exercises find no place in early textbooks. Two current and two recent books include none of these exercises; all other books offer a few. It should be mentioned that in most textbooks these are among the optional topics. "Concrete applications" include all exercises which illustrate some use of geometric principles in situations outside of geometry. The authors of early textbooks made slight use of real situations even in problems of computation in which real problems are notably numerous. The greatest departure from a purely geometric statement made by some of the early books is the use of "west" or "east" or "field" in place of "figure," etc. Exercises modern in setting are typical of current and recent textbooks, though notable variations exist in the importance attached to these in the various books.

APPRAISAL AND CONCLUSIONS

The following evaluations of the changes made in current and recent textbooks in geometry from the point of view of the criticisms classified at the beginning of this article may be made.

1. Efforts on the part of writers of current and recent textbooks in plane geometry toward establishing a concrete basis for the beginnings of demonstrative geometry are shown in a longer and more informal introductory chapter, in the introduction of developmental exercises and material, in the provision of many concrete illustrations of geometric principles, in the use of "practical" questions and exercises, in the use of geometric instruments, and in an increased use of all types of illustrations.

2. An endeavor to meet the criticisms of the practice of passing from one principle or theorem to another without applying these principles in various situations is shown in the introduction of exercises in the preliminary pages, in the greatly increased emphasis given exercises immediately following theorems and problems, in the general use of the applied problem, and in the descriptions and the use of geometric instruments.

3. Less attention to scientific rigor and strict logic and more emphasis on a presentation from the point of view of the pupil are seen in the general acceptance without proof of many evident truths,

in the use of informal proofs for many theorems formerly given formal proofs, and in the giving of informal explanations of many terms rather than precise definitions.

4. The recognition of training in logical thinking as a most important outcome of the study of plane geometry is evident in the decreased emphasis on the complete model proof; in the general emergence of the incomplete proof and problem and the unproved theorem and unsolved problem; in the analytic proofs and in the analyses of problems; in the provision of hints for the solution of exercises in the form of analyses or questions and the suggestion of plans of attack in theorems; in the interrogative statement of exercises; in the attempts to grade the exercises according to difficulty; in the significant increase in the number of exercises of nearly all types; in the introduction of developmental material and exercises, especially in recent textbooks; and in the grouping of theorems.

5. Attempts to effect some correlation with other subjects is seen in the increased numbers and percentages of algebraic exercises, especially in recent textbooks; in the introduction of trigonometric exercises and topics in many current and recent books; in the derivation and summary of formulas; in the use of algebraic analysis and notation; and in the introduction in a few books of topics from algebra, analytic geometry, and astronomy.

6. The problem of individual differences is given some attention in the inclusion of optional material; in differentiation in theorems, problems, and exercises; and in one book through the use of the same material for all pupils, but at different levels of attainment.

7. Particular emphasis has been given to the improvement of the treatment of definitions, theory of limits, ratio and proportion, and loci in many current and recent textbooks.

From the point of view of the psychology of learning, it appears that significant advance has been made in current and recent textbooks, primarily in the latter. The content of the early books—consisting mainly in definitions, theorems, problems, corollaries, and scholia—made little appeal to the pupil's instinct of discovery. His mental activity consisted mostly in passively following explanations and proofs. Leading the pupil into independent discovery through experimental work, giving challenges to his curiosity, imag-

ination, and ingenuity, and assisting him to an understanding of the principles of geometry through their application in many practical situations were not recognized by the writers of these early textbooks as their important tasks. In current and recent books these aims are emphasized in varying degrees. No current book gives the same prominence to the didactic presentation of the logical elements that was given in early books, but extremes of emphasis exist. It is evident also that authors of recent textbooks show a tendency to give only an occasional complete synthetic proof rather than to make this type of proof an integral part of their books. All early textbooks gave primary emphasis to the didactic presentation of the "logical chain." Current textbooks show a breaking-away from the didactic method and a tendency to scatter emphasis to other features besides the logical. In recent textbooks are found still less use of the didactic and synthetic methods, a more general use of questions and analyses, and emphasis varying with the book. An analysis and a discussion following each theorem are outstanding features in one book; the developmental exercise receives most attention in another; carefully directed constructions and computations leading to inferences and an understanding of terms and concepts hold an emphatic place in a third; developmental lessons leading to inferences which are followed by analyses leading to the discovery of proofs stand out in a fourth; and emphasis on certain theorems as fundamental principles and on a maximum and minimum course appears in a fifth.

Contrary to a belief frequently held, it is found that textbooks in plane geometry have experienced notable changes since 1900 and, in considerable part, reflect the influence of criticisms lodged against the older courses. Clearly, recent tendencies point to the adoption of no single method of attack, but a connecting link apparently runs through the various approaches: all aim toward assisting the pupil to independent discovery of truths and their proofs. It is hoped that the facts revealed in this analysis may help to forward these recent tendencies and that, gradually at least, the old formal, memoriter type of textbook and course in plane geometry will give place to a new type, designed from the point of view of one who learns rather than from the point of view of one who knows.

THE STUDENT SECRETARY

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Individual instruction and remedial case work increase the already heavy load of clerical work which the average teacher must or should do. Often the clerical work causes neglect of the real job of teaching. In the school year 1927-28 at Thornton Township High School a new technique of teaching was introduced in the course in European history. The staff realized that, in order to use individual instruction in large class groups, more efficient procedures of studying and assigning lessons and better means of testing results were necessary. Mimeographed guide sheets were arranged to give: first, specific assignments; second, specific objectives and page references which would aid the pupils in their study; and, third, exercises to help the pupils digest and react to the facts, problems, and questions that form the assimilative material of the course.

In each unit ten mimeographed objective tests were used to test the pupils' progress toward mastery and to assist in reteaching when necessary. A perfect score was required on each of these tests. Before a pupil was given a second trial on a test, he was required to re-read the guide sheet and certain references indicated on a part of the first test, which was returned to him. If he still failed on the test, the teacher gave him special help. Individual instruction makes it easy to teach, test, teach, and test until the pupil masters his work, but individual instruction of this sort also increases the clerical work which must be done by the teacher. It was soon evident that individual instruction must be abandoned or clerical help must be secured.

Student secretaries were appointed in an attempt to solve this problem. The clerical tasks of taking the attendance and passing out the test papers were first given to the secretary. Later the correction of all objective tests was added to the secretary's duties in order that the instructor might have more time to help individual

pupils secure an understanding of history and of the technique to be used in studying history. Thus the importance of the duties of the student secretary increased until the secretary became one of the essential factors in the technique of teaching being used.

In the following paragraphs will be given: first, an explanation of the work of a student secretary; second, a description of the method of selecting the secretaries; third, reasons why the secretaries like their work; and, fourth, the objections which have been raised to the use of student secretaries.

A TYPICAL DAY'S WORK OF A SECRETARY

When a secretary enters the room, she first takes from the files the unfinished tests and passes these out to the pupils. At this time and throughout the period, she passes out new tests as these are required. Early in the period the secretary takes the attendance. She then records on the class record sheet the names of the absent pupils and prepares a report of the absences for the office.

The greater part of the secretary's time is devoted to correcting the objective tests taken by the pupils. During each unit approximately five thousand tests are used in six classes taught by an instructor. The assimilative period usually occupies about fifteen days. Therefore, an average of about fifty-five tests are corrected during each class period. The range of the number of tests corrected in any one period is from 3 to 111. Whenever the secretary has more than seventy-five or eighty tests for correction, it is necessary for the teacher to help her. In order that the reader may appreciate the difficulty of handling this large number of tests, it may be said that each mimeographed test is given out separately, that as many as ten different tests are often corrected during a period, and that the tests are usually corrected within a minute or two after they are turned in by the pupils. The secretary does not use a key in correcting the tests.

On days when the secretary is not particularly busy, she studies her own advance assignment, securing help from the teacher as the need arises. When the secretary completes a problem, she takes the tests which she will later correct. The teacher then corrects and discusses each of these tests with the secretary. Occasionally the

answer to a question may be correctly stated in more than one way. All the possible answers that the pupils may make should be clearly understood by the secretary. On each new problem the teacher usually checks the first few tests corrected by the secretary, especially those on the first unit, when the secretary is learning how to correct tests.

The secretary never discusses with the pupils the mistakes that they make in their tests. The teacher should do all work of this type, as such work requires knowledge of teaching procedure.

The secretary also has on her desk and in her charge all the guide sheets, glue, crayons, rulers, tests, and other class materials. She must see that these are replaced with a fresh supply as needed. At the end of a class period the secretary files all the unfinished tests, as no tests are taken from the room.

After the procedure is carefully established, the teacher finds it possible to place most of the responsibility for the clerical work on the secretary.

SELECTION OF SECRETARIES

When the plan was first adopted, the secretaries were not selected with a great deal of care. The result was a wide difference in the quality of work done by the various secretaries. Now, however, prospective candidates are selected with much care.

European history is primarily a Sophomore course. In the selection of a secretary preference is given to Senior and Junior pupils. The difference of one or two years adds to the maturity of the secretary. It has also been found that the Sophomore pupils give a Junior or Senior secretary more respect than they give a fellow-Sophomore with whom they associate in other classes. After a few attempts to use boys as secretaries had been made, it was decided to select only girls. The boys were not so conscientious as the girls, and many boys hesitated to accept the work because of the fear of being considered "teachers' pets." Then, too, boys at this age are less mature than girls.

Each spring a list of prospective secretaries is made by the history teacher. No pupil is placed on this list unless she is scholastically in the upper fourth of her class. After the list of possible secretaries has been compiled, the class sponsors and several teachers who have had

the pupils in their classes are asked which of these girls are best fitted to become student secretaries. Each of the girls on the revised list is then called into the room of the history teacher. The necessity of pupil help in history and the duties of a secretary are presented to the candidate. Each girl is questioned about her course of study and probable vocation when she leaves school. If possible, the pupils who are planning to become teachers are given preference. The girls who are training for secretarial work are given second choice. If after this interview the pupil is interested in taking history and in doing the secretarial work, she is given the name of a girl who has been a secretary so that she can question the former secretary concerning her experience. The candidate is asked to present the matter to her parents and secure their permission to become a secretary. When the final selection is made, a great deal of consideration is given to the character and the quality of leadership of the girl. The timid, backward girl will not prove successful. The other extreme is equally dangerous. A list of the girls finally selected is then given to the class sponsors, who assign these girls to definite classes. If possible, two girls are placed in each class in order that an alternate may be on hand in case of emergency. Later the girl of the second choice becomes an assistant secretary who serves in case the secretary is absent.

Since only superior pupils are selected as secretaries, they are able, during the study periods in the library and with the individual help of the teacher, to keep ahead of the class. Most of these girls are more mature than their classmates and are therefore able to work more rapidly. It is important that the secretaries do the regular work in history and understand it. The only difference between the work done in history by the secretaries and that done by any other pupil is that the secretaries are excused from the notebook work. Instead of the notebook assignments the secretaries hold individual oral discussions with the teacher concerning the more important items in each unit. The secretaries are expected to do better work on all the tests than do the other pupils. If their tests are not superior, they are required to repeat the tests before they correct those taken by their fellow-pupils.

During the first unit the teacher must carefully train each secre-

tary. All waste motion caused by the wrong use of equipment, such as files and trays for passing out tests, should be eliminated. If the girl has had office training in the commercial department, it is less difficult to train her in this respect. The routine relations between the pupils and the secretary must be carefully established. The ordinary classroom is unsuitable for use as a laboratory in history-teaching. Much confusion can be avoided, however, if a few fixed rules relating to movements about the room are enforced. First, never allow a pupil to come to the back of the secretary's desk. Second, never allow more than three pupils to gather around the secretary. Third, provide a basket in which pupils may regularly place their completed tests. Fourth, do not permit the pupils to talk to the secretary except for the purpose of asking for their tests by numbers. A teacher, by establishing and insisting on a definite routine, fixes the relations between the pupils and the secretary and thus prevents any trouble between them.

PLEASURE FOUND BY STUDENT SECRETARIES IN THEIR WORK

During the last four years eighteen secretaries have been used in European-history classes in the Thornton Township High School. At the end of the first unit every secretary is given the opportunity to become a regular pupil. Only one secretary has wanted to do so. A secretary must earn a mark of A in order to keep her position. Three of the eighteen secretaries have been replaced during the year because of poor work either in connection with their duties as secretaries or in the regular history course. Two of these three pupils were appointed before the method of selecting secretaries had been fully developed.

The pupil considers it a great honor to be appointed as secretary. Often a secretary voluntarily stays after school to help correct the test papers of backward pupils. She enters into the work with the zeal of a teacher. The secretary shows her interest in the accuracy of her work. Since the opening day of school in September, 1931, the secretary in charge of the class that meets during the last period has never forgotten to take the daily absence slips to the office.

The teacher emphasizes the importance of the secretarial work and indicates the value of this type of training to a girl planning to

become a teacher or private secretary in later life. The secretary realizes that she is learning more history than her fellow-pupils and appreciates the training in clerical work that she is receiving. This appreciation is reflected in an interest in her work that is exceptional in a high-school girl.

OBJECTIONS RAISED TO USE OF STUDENT SECRETARIES

Other teachers and a few pupils sometimes feel that student secretaries are incompetent. They believe that the teacher should not delegate this part of his work. At the beginning of each year the history teacher tries to impress on the pupils the necessity of secretarial assistance if the plan of teaching is to succeed. This presentation tends to create a favorable attitude toward the secretary.

When a question arises as to the correct marking of tests, it is usually caused by misunderstanding on the part of the pupils. The corrected test papers are kept on file so that pupils who think they have the right answer can be shown otherwise. The teacher always tries to clear up any little misunderstandings of this sort in order to show that the pupil rather than the secretary has erred. Occasionally a secretary is incompetent. If she fails to improve, a new secretary is appointed. Only one of eighteen secretaries has so far been removed because of incompetency as a secretary.

Occasionally a question in a test is poorly constructed in that it is not sufficiently objective. When such a question is discovered, it is disregarded when the test is corrected. These questions are revised before they are used the next year. This practice tends to prevent secretarial errors in the correction of the tests.

The teacher has an excellent check on the secretary's accuracy in correcting the tests. Whenever a pupil makes a mistake on his second trial of any test, the paper is turned over to the teacher for remedial teaching. If the test is wrongly corrected, the fact is detected at this time. The secretary then explains why she marked the test as she did. Any misunderstanding as to the proper answer is cleared up at once. When the secretary makes the mistake, attention is again called to the need of accuracy as well as speed. Most of the secretaries make comparatively few errors.

Another criticism of the use of student secretaries is the feeling that the secretaries have "a soft job" and an easy way of getting an

A. The remedy for this criticism is to make the secretaries earn the A's and let the other pupils know that they are earning high marks. Usually a pupil of a jealous nature starts these stories, and the best way to meet them is to state the truth and then to disregard them. A few parents have complained of favoritism shown the secretaries. These misunderstandings are easily cleared up by explaining the work of the secretary to these parents.

In order to avoid trouble with parents who do not want their girl to be a student secretary, it is a good policy to secure the parents' permission before the appointment is made. Parents can usually be convinced of the value to their child of this type of work. If they still object, the best plan is to use another girl for the secretaryship.

Another danger in using a student secretary is the possibility of overloading a secretary with work. Whenever the secretary is not able to keep up with the tests to be corrected, the teacher should find the cause. If there are too many tests to be corrected, the teacher must help or the entire procedure of the class will be slowed up with a resulting loss of the pupils' time.

CONCLUSION

To prepare objective tests requires energy and time. To train secretaries takes time. In the end, however, the teacher is freed of the clerical burden of teaching and can really teach. Until superintendents and school boards can be convinced of the value of paid clerical aid, the student secretary offers a solution to the problem of caring for the increasing amount of clerical work introduced by new methods of teaching.

OCCUPATIONAL CAREERS OF HIGH-SCHOOL GRADUATES

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A study was made in 1930-31 of the occupational careers of 1,003 graduates of the high school in Newton, Iowa, who had completed their high-school courses during the period 1920-29. Five hundred and sixty-three graduates had taken vocational courses; 440, academic and college-preparatory courses. All the graduates of vocational courses were included; the non-vocational graduates selected for study were a random sampling of all such graduates. The situation in Newton is particularly significant because the public high school there has been a pioneer in giving vocational training and because the vocations taught are varied, since the city is both an agricultural center and an industrial center. Throughout the decade studied, courses have been provided for trade and industrial workers, farmers, home-makers, office workers, and teachers.

Three types of classification were made of the data collected: (1) an occupational distribution of the graduates of each course in their first year after graduation, (2) an occupational distribution of the graduates of each course on June 1, 1930, and (3) a distribution, according to the high-school courses completed, of the persons following in 1930 each type of occupation represented.

Trades and industries.—The occupational distribution of the graduates of the course in trades and industries is given in Table I. Of the graduates who in 1930 were engaged in industrial occupations, 50.0 per cent had been recruited from the course in trades and industries, 37.9 per cent from the non-vocational courses, and 12.1 per cent from the course in vocational agriculture.

Vocational agriculture.—The occupational distribution of the graduates in vocational agriculture is shown in Table II. In

1930, 74.7 per cent of the graduates engaged in agricultural occupations were graduates of the course in vocational agriculture, 22.6 per cent were graduates of the non-vocational courses, and 2.7 per cent were graduates of the course in trades and industries.

TABLE I

OCCUPATIONAL DISTRIBUTION OF 89 GRADUATES OF COURSE
IN TRADES AND INDUSTRIES

OCCUPATIONS FOLLOWED	FIRST YEAR AFTER GRADUATION		JUNE 1, 1930	
	Number	Per Cent	Number	Per Cent
Industrial.....	59	66.3	58	65.2
Agricultural.....	3	3.4	2	2.3
Commercial.....	5	5.6	9	10.0
Attending college..	5	5.6	1	1.1
Unclassified.....	17	19.1	19	21.4
Total.....	89	100.0	89	100.0

TABLE II

OCCUPATIONAL DISTRIBUTION OF 112 GRADUATES OF COURSE
IN VOCATIONAL AGRICULTURE

OCCUPATIONS FOLLOWED	FIRST YEAR AFTER GRADUATION		JUNE 1, 1930	
	Number	Per Cent	Number	Per Cent
Agricultural.....	54	48.2	56	50.0
Industrial.....	13	11.6	14	12.5
Commercial.....	5	4.5	8	7.1
Attending college..	9	8.0	6	5.4
Unclassified.....	31	27.7	28	25.0
Total.....	112	100.0	112	100.0

Commerce.—A distribution of the graduates from the commercial course is given in Table III. The men graduates engaged in commercial occupations in 1930 had taken the following courses: non-vocational courses, 67 per cent; commercial course, 11.4 per cent; vocational agriculture, 11.4 per cent; and trades and industries, 10.1 per cent. The women graduates engaged in commercial pursuits in 1930 had been recruited as follows: commercial course, 51.5 per cent; non-vocational courses, 34.2 per cent; and normal-training course, 14.2 per cent.

Teaching.—The occupations followed by graduates of the normal-training course are shown in Table IV. In 1930, 72.1 per cent of the graduates engaged in teaching were normal-training graduates, 22.1 per cent were graduates of the non-vocational courses, and 5.8 per cent were graduates of the commercial course.

TABLE III
OCCUPATIONAL DISTRIBUTION OF 179 GRADUATES
OF COMMERCIAL COURSE

OCCUPATIONS FOLLOWED	FIRST YEAR AFTER GRADUATION		JUNE 1, 1930	
	Number	Per Cent	Number	Per Cent
Commercial.....	101	56.4	88	49.2
Home-making.....	20	11.2	42	23.5
Attending college..	23	12.8	10	5.5
Teaching.....	1	0.6	5	2.8
Unclassified.....	34	19.0	34	19.0
Total.....	179	100.0	179	100.0

TABLE IV
OCCUPATIONAL DISTRIBUTION OF 183 NORMAL-
TRAINING GRADUATES

OCCUPATIONS FOLLOWED	FIRST YEAR AFTER GRADUATION		JUNE 1, 1930	
	Number	Per Cent	Number	Per Cent
Teaching.....	105	57.4	62	33.9
Attending college..	24	13.1	10	5.4
Commercial.....	18	9.8	19	10.4
Home-making.....	14	7.7	65	35.5
Unclassified.....	22	12.0	27	14.8
Total.....	183	100.0	183	100.0

Careers of non-vocational graduates.—An occupational distribution of the male graduates of non-vocational courses is given in Table V. Of all male graduates entering college, 87.9 per cent were from the non-vocational and college-preparatory courses, 4.3 per cent were from the course in trades and industries, and 7.8 per cent were from the course in vocational agriculture.

Table VI gives the occupational distribution of the women graduates of non-vocational courses. Of all women graduates entering college, 61.2 per cent were graduates of non-vocational or college-preparatory courses, while the commercial and normal-training courses furnished 19.0 per cent and 19.8 per cent, respectively.

TABLE V

OCCUPATIONAL DISTRIBUTION OF 237 MEN GRADUATES
OF NON-VOCATIONAL COURSES

OCCUPATIONS FOLLOWED	FIRST YEAR AFTER GRADUATION		JUNE 1, 1930	
	Number	Per Cent	Number	Per Cent
Attending college..	102	43.0	48	20.2
Commercial.....	39	16.5	56	23.6
Agricultural.....	17	7.2	17	7.2
Industrial.....	38	16.0	44	18.6
Professional.....	0	0.0	19	8.0
Unclassified.....	41	17.3	53	22.4
Total.....	237	100.0	237	100.0

TABLE VI

OCCUPATIONAL DISTRIBUTION OF 203 WOMEN GRADUATES
OF NON-VOCATIONAL COURSES

OCCUPATIONS FOLLOWED	FIRST YEAR AFTER GRADUATION		JUNE 1, 1930	
	Number	Per Cent	Number	Per Cent
Attending college..	74	36.5	35	17.2
Commercial.....	51	25.1	49	24.1
Home-making.....	22	10.8	52	25.6
Teaching.....	6	3.0	19	9.5
Unclassified.....	50	24.6	48	23.6
Total.....	203	100.0	203	100.0

Conclusions.—The following conclusions appear to be justified on the basis of the foregoing data.

1. The percentage of persons taking vocational courses who have followed the vocations for which they were prepared is considerably higher than the percentage of persons taking academic or college-preparatory courses who entered college.

2. The occupations followed during the first few years after the high-school period were rather closely related to the courses taken in the high school.

3. While many graduates who took vocational courses did not enter the occupations for which they prepared, nearly as many graduates entered occupations for which training was available in the high school without the advantage of specialized occupational training.

4. The fact that considerable numbers of the graduates of vocational and college-preparatory courses failed to realize their objectives with respect to occupation and college attendance emphasizes the need for giving attention in courses of both types to the general values which may come from education in addition to the special values which each type of course has to offer.

Educational Writings

REVIEWS AND BOOK NOTES

A treatise on democratic secondary-school supervision.—The growing interest in secondary-school supervision indicated by recent additions to the small amount of literature available will be further stimulated by another current publication.¹ The style throughout is fresh and vivid, and most of the arguments are genuinely provocative of further thought. Except for a seeming lack of balance resulting from uneven critical analysis, organization of the treatment is excellent. In fact, the book can almost be reviewed by giving four quotations.

The Preface sets forth the purpose of the book.

Supervision in the Secondary School is an attempt to formulate, interpret, and apply to the problems of secondary-school supervision a democratic philosophy of education. . . . This carries with it as a corollary promoting the growth of a teacher's personality and enhancing the dignity of the teaching activity itself. . . .

While recognizing the necessity for deriving specific help from existing practice (and indeed advocating its use at appropriate times), the authors believe there is need for a philosophy of supervision that will give perspective to the practical details of teaching [p. iii].

This democratic philosophy is set forth as follows:

As applied to the supervisor-teacher relationship, the democratic ideal does not sanction the imposition of the supervisor's will upon his colleagues. Neither does it permit of a relationship in which each member of the staff goes his own way without dynamic connections with his fellows or the aims and purposes of the school as a whole [p. 91].

The fact that not all situations permit the operation of the democratically desirable ideal is indicated by the following passage.

Under normal conditions a supervisor must deal with teachers on various levels. Some are capable of independent action. Others are still dependent. This calls for a supervisory policy which adapts itself to the needs of both groups.

A complete discussion of democratic supervision would deal with the measures appropriate to employ on all levels of proficiency [p. 95].

Part I roundly condemns "laissez faire" and "autocratic" supervision and ends with the authors' concept of democratic supervision. Chapters iii, iv, and v

¹ H. B. Alberty and V. T. Thayer, *Supervision in the Secondary School*. Boston: D. C. Heath & Co., 1931. Pp. viii+472. \$2.50.

add to the rising tide of protest against certain dangers in the science of education—chiefly misuses and misunderstandings of science in education. The discussion is far superior to the lachrymatory jeremiads so far representative of this protest, but it is unbalanced in that uses and values of scientific method in education, while mentioned, are not emphasized equally with the dangers. Stimulating as the chapters are to careful students, they are likely to misinterpretation by superficial individuals. A similar lack of balance is seen in the vivid and interesting argument for more democracy in that, while the values and advantages are well set forth, the dangers are not.

The discussion of techniques in Part II is impossibly inadequate, only five of the myriad procedures in the field being mentioned. Current practice is rather too severely condemned. The authors' theory for betterment is well set forth, but little concrete application is included. It is possible, of course, that the writers deliberately refrained from imposing on students and workers their own ideas of practice.

There is a thoroughly helpful, well-balanced discussion of the supervisor's relations to the pupil, material not usually found in textbooks on supervision.

Part II on organization is brief, borrowing freely from the Eighth Yearbook of the Department of Superintendence and from the volume *The Organization of Supervision* by Fred C. Ayer and A. S. Barr. It does not deal with secondary-school problems in any particular way; in fact, the whole book deals with supervision in general rather than with the special problems of the upper school.

In summary, the reviewer feels, first, that the treatment of technique is of little value. One may agree with the writers' fine emphasis on democratic supervision which will emphasize teacher growth, independence, and participation and still regret the neglect of necessary supervisory activities of inspection, training, and guidance. Second, if the volume is, however, regarded not as a manual but as an effort to present and emphasize the more democratic view, to stimulate educationists, whether supervisors or not, to critical analysis of problems profoundly affecting education—particularly supervision—then the book may be regarded as an exceptionally stimulating contribution.

W. H. BURTON

An examination of certain trends in college education.—Surveys or overviews of the many changes being introduced in college and university education have been presented in several recent volumes, among which are *Current Educational Readjustments in Higher Institutions*, the 1929 Yearbook of the National Society of College Teachers of Education, with its supplement, *Some Aspects of Current Efforts To Improve College Instruction*, a bulletin of the University of Kentucky, and are also to be presented in *Current Changes and Experiments in Liberal-Arts Education*, a Yearbook of the National Society for the Study of Education. The title of a new publication of the University of Chicago¹ would lead one to

¹ *Recent Trends in American College Education*. Edited by William S. Gray. Proceedings of the Institute for Administrative Officers of Higher Institutions, 1931, Vol. III. Chicago: University of Chicago Press, 1931. Pp. x+254. \$2.00.

expect another comprehensive view of trends in the field. The volume is, however, rather an examination of certain important phases of change—the three phases around which the contributors' papers have been grouped: the reorganization of the junior college, the reorganization of the senior college (the significant aspects of which, as considered, are the provisions for honors and tutorial or independent study), and comprehensive examinations.

Of the nine papers dealing with the first topic, one reviews trends at the junior-college level; one describes the new curriculum at the University of Wisconsin; one the curriculum of the Junior College of Kansas City, Missouri; one the plans for Bennington College, Bennington, Vermont; and five detail the new college plan of the University of Chicago. Secondary-school officials, because of the fact that "the junior-college period is rapidly being allocated to the secondary school" (p. 10), will perhaps find most of immediate interest in the first section. The summary by Professor Koos of the results of a national survey contains the statement just quoted and says that this development is the most dramatic and significant trend at the junior-college level. The history and the program of the Junior College of Kansas City illustrate very fully the actuality of the development. In addition, the chapter reports an experiment in secondary education in Kansas City which has as its object the shortening of the period allotted to this level, the plan being to cover the last two years of high school and the two years of junior college in a period of three years. The plan for Bennington College recognizes the validity of the division between the junior college and the senior college; it leaves to the high schools the framing of their curriculums; but it points out that habits leading to the independent study and self-education now being emphasized in colleges should be fostered in the secondary schools. The college program of the University of Chicago is designed to bridge the gap between high-school and university performance in a flexible way suited to the individual interests and abilities of students and to provide a "general education."

In the second section of the book, following an introductory survey, two excellent chapters present recent developments in independent study, reading periods, general examinations, and housing plans at Harvard and at Yale. The independent-study plan at Stanford University is described, and then follow five chapters devoted to the upper divisions at the University of Chicago.

Six chapters dealing with comprehensive examinations and tests comprise Part III. The emphasis in all except the last paper is on principles and methods used or to be used in the construction of these examinations and tests, and no effort is made to describe the operation of comprehensive examinations as in use in various institutions. The final paper, on the measurement of social attitudes, describes some experiments that were made to measure the effects of social stimuli on the attitudes of high-school children.

The excellence of the volume consists in the detailed examination into certain phases of change by men who are in actual control of the work which they discuss. There is some fine material, especially that on independent study and comprehensive examinations and tests, of especial use to technicians in the

field. The substance of the book, already limited to certain trends in American college education, is further limited through the devotion of eleven out of the twenty-four chapters to changes at the University of Chicago. Evidently the book will be of greatest use to persons engaged in administration and instruction in colleges and universities, a group to which the papers were in fact addressed.

The importance of the book for secondary-school administrators and teachers lies in the fact that all the papers show that self-education—independent thought and independent study—is the goal to which most changes in higher education are tending and that this goal cannot be completely reached until study methods consistent with it are common during the high-school years. President Leigh of Bennington College stated:

We realize that to be effective the transformation of purpose should begin before college. This is the very spearhead of the American educational problem. . . . Independent thinking, intellectual and artistic interests, self-dependence, are not created overnight, in a series of orientation courses, or in four years of late adolescence. They need to be fostered carefully and consistently from the earliest school years [p. 39].

As in England the success of the tutorial method at Oxford rests on the assumption and the fact that "the major part of a university education is to be secured at school"—meaning that the student arrives at the university matured through the thoroughness of his studies and the amount of independent or extra-classroom activity and with his interests and aptitudes developed by the school—so in this country the success of the independent-study methods in higher education must rely for its complete realization on the conditioning of students during their secondary-school years.

FRANCES VALIANT SPEEK

AMERICAN ASSOCIATION OF UNIVERSITY WOMEN
WASHINGTON, D.C.

Reading interests of adults.—Strangely enough, the analytical study of that fascinating but elusive subject, the reading interests of adults, has only recently been attempted in any serious fashion. The publication of the book under review¹ brings to our attention the first really thorough and decidedly the most ambitious piece of research yet attempted in this field. By comparison, the only other full-length American work on reading interests, that by Gray and Munroe, is relatively simple in method. The distinguishing feature of the present study is that it uses the group as a unit of measure, while Professor Gray and Miss Munroe devoted themselves largely to case studies of the reading habits of individuals. The present project is even more ambitious in that the authors contemplate the publication of additional data within two years,

¹ Douglas Waples and Ralph W. Tyler, *What People Want To Read About: A Study of Group Interests and a Survey of Problems in Adult Reading*. Chicago: American Library Association and University of Chicago Press, 1931. Pp. xxx+312. \$3.50.

By means of a carefully selected series of questions suggested by topics most frequently discussed in recent popular periodical literature, the authors have analyzed the reading interests of about one hundred more or less typical groups of adult readers. Fiction, poetry, humor, and articles of vocational nature were excluded from the investigation. The presentation of the complicated findings is aided by numerous diagrams and tabular statements, and the technique used by the authors is explained at length by Professor Tyler. Many of the details have very properly been relegated to a series of appendixes occupying nearly a third of the volume.

The effort of the authors has been to suggest a method and to illustrate it fully rather than to present final and definite conclusions. Throughout, they have endeavored to point out how the findings may be put to practical use by librarians, publishers, teachers, and others interested in adult reading. The most concrete, and perhaps most significant, results are found in the chapters which discuss the special reading interests of certain groups of individuals and the varied manner in which groups react to different topics. It is evident that the keenest reading desires of many groups are not adequately covered by the collections of public libraries or by the current output of publishers. Whether all these topics are worthy of representation is another question.

Perhaps it is too much to expect that a highly technical study of this sort should be as interesting as its rather appealing title might lead the unwary reader to anticipate. One suspects that the very persons who most need to investigate its findings will in many instances be deterred from so doing by the perhaps necessarily mechanical treatment of the material. Nevertheless, the authors are to be congratulated for their bold and conscientious pioneering in a little-explored field. Librarians, particularly, will find that this volume deserves their serious consideration, even though many of them may not be persuaded to follow its methods completely.

CARLETON B. JOECKEL

UNIVERSITY OF MICHIGAN

Experimental study of ability of college students in reading.—Two questions relating to the reading habits of college students have been asked with increasing frequency during recent years: How well do they read? Can they be taught to read more intelligently? A survey of the literature of this field has disclosed more than thirty valuable investigations. The results of these studies show clearly the inadequacy of the reading habits of many students and have supplied evidence of the possibility of improving these habits. The findings have recently been supplemented by the results of a series of carefully planned experiments¹ undertaken for the purpose of determining whether college students can be taught to read more intelligently by means of intensive drills and vocabulary tests.

¹ Alvin C. Eurich, *The Reading Abilities of College Students: An Experimental Study*. Minneapolis, Minnesota: University of Minnesota Press, 1931. Pp. xvi+208. \$2.50.

The investigation as a whole "sought to evaluate the efficacy of reading, vocabulary, and study exercises in improving reading comprehension, rate of reading, specific vocabulary, general vocabulary, retention in reading, English composition, general scholarship, and general mental ability as measured by the Minnesota College Ability Test" (p. 168). Four distinct controlled experiments were involved. Experiment I aimed to determine the value of three types of exercises used simultaneously, namely, vocabulary drills, paragraph-reading exercises, and study exercises. In Experiment II use was made of vocabulary exercises only and in Experiment III of drills in paragraph-reading. In Experiment IV intensive vocabulary drills were used.

The report of this series of investigations is divided into three parts. Part I defines the problem and summarizes related investigations. Part II describes the nature, reliability, and validity of the various tests and scales used in the experiment. These included the Minnesota Reading Examination for College Students, Revised Form; Minnesota Reading Examination Xi XIII; Minnesota Speed of Reading Test for College Students; a studiousness rating scale; a vocabulary test for college students. Part III describes the experiments and presents and interprets the findings.

The records secured during the experiment failed to show that the training exercises as given had any significant effect on reading comprehension, rate of reading, retention in reading, achievement in English composition, or general scholarship. On the other hand, when specific tests including the words upon which there had been practice were used, there was clear evidence of vocabulary improvement. In only the fourth experiment was evidence secured of improvement in general vocabulary, and the improvement did not persist throughout the period of the experiment.

These results are not as promising as those of some of the previous investigations. There are two possible explanations. First, the practice provided took the form of drill, whereas in other experiments the training was often given as an integral part of directed-study activities based on the content of a course. Second, the practice exercises were given to all students regardless of their level of achievement, whereas other investigators have usually directed attention to the poorer readers. Experiments have shown repeatedly that good readers improve little, if at all, in reading achievement as a result of practice which is well within their initial reading ability.

Eurich's report is of special value to investigators and others interested in the improvement of reading among college students. It suggests the wisdom of providing specific training in order to secure improvement in vocabulary mastery. It suggests the need of additional experiments to determine the possibility of improvement in "other peculiar functions of the reading abilities." It also points out the need of studies to determine whether training in vocabulary or other phases of reading can be so given as to result in general as well as specific improvement in the functions practiced.

WILLIAM S. GRAY

A survey of the adolescent age.—The harmonization of materials of instruction with individual differences in abilities and traits of youth is, obviously, an undertaking which continues from generation to generation. Four major problems are involved in this responsibility of educators: the outcomes desired, an understanding of adolescence, materials of instruction, and educational procedures. The book which is reviewed here¹ consists in a compilation and integration of points of view and evidence on two of these problems—understanding of adolescence and educational procedures. Rather copious excerpts are presented both for their own significance and to support the author's emphasis on an increasing need for study of the psychological and physiological characteristics of boys and girls in our present educational endeavors. The work of G. Stanley Hall, to whose memory a dedicatory note is inscribed, appears to have left a greater imprint on Professor Bolton's conception of the nature of adolescence and the implications for education which he portrays than that of any other student of this period of life. A partisan point of view is not reflected, however. Both sides of controversial questions are well represented. Two sentences bearing on the saltatory theory of adolescence are given here to illustrate the introduction of diverse points of view into the survey. The first is quoted from G. Stanley Hall: "Adolescence is a new birth, for the higher and more completely human traits are now born" (p. 77). The second sentence is from Volume I of Thorndike's *Educational Psychology*: "It is a favorite dictum of superficial psychology and pedagogy that instincts lie entirely dormant and then spring into full strength within a few weeks" (p. 78).

The first three chapters of Bolton's book are devoted to "A New Era in Adolescent Education," "The Stage of Preadolescence," and "Recognition of the Period of Adolescence." These serve as a general orientation to the work and are followed by three chapters on physiological growth and disease and five on mental traits and abilities. Chapters on "Adolescent Mental Deviation and Education," "Youth and Crime," "Ministration to Individual Differences," "Some Paramount Objectives of Secondary Education," and "Character Education" complete the volume. Sources of quoted materials include newspapers, treatises which approach adolescence from many angles, and researches conducted in this field of education. Reasoned points of view and findings of careful investigators predominate; excerpts of opinionative statements are from writers whose positions or offices demand that their judgments at least be given consideration.

To the student beginning his study of professional writings on the adolescent period and to the experienced worker who wishes to review rapidly the contributions to this field, the book should be very helpful. Those who have followed educational investigation and writings carefully for a decade or more will find the work serviceable chiefly for reference; it does not present a new thesis. In his Preface the author states his purpose as follows:

¹ Frederick Elmer Bolton, *Adolescent Education*. New York: Macmillan Co., 1931. Pp. xvi+506. \$3.00.

Many books have been written that deal with school organization, but few writers have attempted an analysis of adolescent traits and their development. A scientific adjustment of education to adolescent needs can be made only when the dominant traits of the period of adolescence are known. The present study makes such a survey. It also suggests educational procedures in harmony with the unfolding nature of youth [p. vii].

The survey has been extensive and discriminative. The suggestions of educational procedures are only indicative; they are not sufficiently explicit to be directly serviceable to classroom teachers.

C. A. BUCKNER

UNIVERSITY OF PITTSBURGH

A high-school textbook on the home.—One of the recognized trends in home-economics instruction at all levels is a focusing of attention on the family and the relation of the various phases of home-making to the well-being, development, and satisfaction of both children and adults. The volume under review¹ provides the teacher of high-school courses with a valuable tool for enlisting the interest and stimulating the thinking of boys and girls regarding housing, the organization of activities in the household, and the relation of each to family life. In an introductory statement the author, indicating the underlying theme of the book, says that the home is a place for expression, that buildings become homes to the extent to which they meet human needs and desires, and that for the attainment of this end adjustments of the physical structure and the social life of the group are constantly needed.

The text is based on nine concepts which the author regards as fundamental for the high-school pupil: (1) the relation of shelter to the social life of the family, (2) the possible relation of housing to health and safety, (3) the effect of the physical and social environment of the community on home life, (4) the function of floor plans and their interpretation in terms of individual needs, (5) domestic architecture as an expression of ideals of beauty modified by environmental conditions, (6) the relation of household furnishings to human use and happiness, (7) the relation of the care of furnishings to the preservation of qualities of satisfaction, (8) labor as both an emotional and a mechanical adjustment, and (9) the social-economic aspects of paid household labor and its relation to housing.

Each concept is developed in a series of chapters which is treated as a unit. The sections dealing with the effect of one's attitude on the work of the home and with the employer-employee relationships growing out of paid household service are a contribution not found in earlier textbooks.

The merits of the book are many. Its scope helps the pupil to see housing in the large. Its emphasis on the *selection* of living quarters for the individual

¹ Hazel Shultz, *Making Homes*. New York: D. Appleton & Co., 1931. Pp. xx+520. \$2.00.

and group is desirable in an era when increasing numbers must choose the place for a home from dwellings available. The frequent use of illustrations that hold special interest for the high-school pupil is commendable. Approximately two hundred well-chosen figures supplement the text. Excellent lists of selected readings are included to meet the needs of pupil and teacher. Pretest questions on each unit are listed. In addition, pertinent questions and problems are found throughout the presentation of each unit, and at the close of each unit are suggestions for special study.

The weaknesses are those which result from an attempt to survey a wide field for study and to point out relationships in it. Pupils in rural and village areas are likely to miss frequent references to conditions under which they live and to find a more detailed presentation of conditions and problems in urban areas. Methods of making present homes more comfortable and convenient with little expenditure of money might have received more attention. The emphasis on period furniture seems out of proportion to that given to other furnishings. The omission of the economic relations that are so important in connection with housing decisions seems unfortunate, even though the reader is referred to another book in which this subject is presented.

OHIO STATE UNIVERSITY

RUTH LINDQUIST

A history of the United States for seventh and eighth grades.—A new textbook in the history of our country intended for use in Grades VII and VIII,¹ instead of following the conventional organization by chapters, is organized in twenty-five units of about twenty pages each, but the distinction between unit and chapter seems to be nominal. In their allotment of space the authors have assigned 5 per cent of the book to Colonial times, 14 per cent to the Revolution, another 14 per cent to the causes and progress of the Civil War, 20 per cent to the period between the Revolution and the Civil War, while nearly half the book deals with the historic events since the Civil War. It is undoubtedly desirable to lay emphasis on the period since 1865, but it seems strange to find the elections and policies of three presidents—Harding, Coolidge, and Hoover—dismissed in a paragraph of sixteen lines. This paragraph is illogically included in a unit dealing with the World War.

In style this textbook seems didactic with a very large proportion of expository material and a comparatively small proportion of narrative and descriptive material. More narrative material would have made the book more interesting. As it is, it conveys the impression of a greatly expanded syllabus.

Each unit closes with an outline summary, which needlessly repeats the paragraph headings used in the unit. This summary is followed by a group of valuable questions, by a large number of purposeful activities, and by brief

¹ Henry Smith Chapman and Orrello C. Whitney, *The History of Our Nation*. Boston: Houghton Mifflin Co., 1931. Pp. x+542+lx. \$1.72.

bibliographies for both teacher and pupil. The Appendix includes the Declaration of Independence, the Constitution of 1787, the Gettysburg Address, a suggested list of books for a school library, and a miscellaneous assortment of factual information.

The book is well printed and well bound. It will be useful in the classroom and should prove to be teachable. The scholarship is sound, and no errors either of fact or of printing were found in the book.

D. S. BRAINARD

STATE TEACHERS COLLEGE
ST. CLOUD, MINNESOTA

Poetic literature.—Mr. de Vries tells us in the Preface to his book¹ that his study might well have been given the title, among others, of "A Psychological Analysis of Literature." He speaks truly. Indeed, the book might have been called "Literature Psychologized" or "The Psychologist Microscopes Literature," for the creator of literature, his creation, and his audience are rather minutely inspected and dissected according to variant psychological theories and tenets. Mr. de Vries in his Introduction divides literature into two categories, poetic and intellectual (or scientific). For the material of his study he chooses poetic literature and then elects to produce the other kind in his treatment of it.

The reviewer hastens to assert, lest the preceding paragraph lead to misunderstanding, that, so far as he can discover, the content, points of view, and conclusions of the study are sound and acceptable both to one as author (the interpretative recorder of experience) and to one as reader (the more or less active participant in someone else's experience). Moreover, the study is the most complete of its kind with which the writer is acquainted. It consists of ten relatively long chapters. The first chapter deals fully with the question "What Is Literature?" and classifies it into two kinds: poetic literature, consisting of lyric poetry, fiction (epic, novel, short story, etc.), and drama; and scientific or intellectual literature, consisting of works on mathematics, science, philosophy, sociology, history, and the like. The subsequent chapters treat some of the important features of human behavior and show how these play rôles in literature. These chapters are given the following descriptive titles: "Empathy," "Association," "The Creative Imagination," "Emotion," "Ideas, Images, and Words," "Poetry and Science," "Language," "Poetry and Life," and "The Value of Poetry." Each chapter treats its subject lucidly and comprehensively, albeit with a terminology unwontedly psychological and not infrequently with an exaggerated emphasis on minutiae. Each chapter contains a wealth of material for the teacher or the student of books who wishes to see his literature through the psychological lens.

¹ Louis Peter de Vries, *The Nature of Poetic Literature*. University of Washington Publications in Language and Literature, Vol. VII. Seattle, Washington: University of Washington, 1930. Pp. x+248. \$1.50.

It is on this last point that one questions the ultimate worth of the many sincere efforts of students to become coolly objective and scientific in dealing with many phases of life. After all, certain things *are* obvious, even to the untutored. Treating them scientifically seldom clarifies them. They require no demonstration. We need no controlled experiment to prove that continued walking over a patch of grass will make a path. Not an elementary-school pupil but will tell in his own simple, and often very understanding, way that an author writes about the things he or someone else has done and what he thinks and feels about those things and that a reader is interested or indifferent to these events and their interpretation to the degree that his own life, either immediately or remotely, is kindred to them. Is one a traitor to the best of the modern trend if one finds more to help one enjoy and understand poetry, its sources and stimuli, in Wordsworth's Preface to the *Lyrical Ballads*, or Shelley's *A Defense of Poetry*, or Arnold's *Essays in Criticism* than in a roomful of books haloed—or, perhaps better, sloganized—by the epithet "scientific"? The reviewer thinks not. Does one need to go much beyond poetry itself to know what one's responses to it are and in what its values consist? Candidly, then, while the reviewer has no hesitation in saying that Mr. de Vries's book is one of the most satisfactory of its kind, he still harbors misgivings as to the whole group of which it is a member.

HOWARD FRANCIS SEELY

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CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY AND PRACTICE

- Body Mechanics: Education and Practice.* Report of the Subcommittee on Orthopedics and Body Mechanics, Robert B. Osgood, Chairman. Section I, Medical Service, White House Conference on Child Health and Protection. New York: Century Co., 1932. Pp. xiv+166. \$1.50.
- COX, PHILIP W. L., and LONG, FORREST E. *Principles of Secondary Education.* Boston: D. C. Heath & Co., 1932. Pp. viii+620. \$2.40.
- French Liberalism and Education in the Eighteenth Century: The Writings of La Chalotais, Turgot, Diderot, and Condorcet on National Education.* Translated and edited by F. de la Fontainerie. New York: McGraw-Hill Book Co., Inc., 1932. Pp. x+386. \$2.25.
- GODFREY, CHARLES, and SIDDONS, A. W. *The Teaching of Elementary Mathematics.* Cambridge, England: Cambridge University Press, 1931. Pp. xii+322. \$2.50.
- HAYNES, BENJAMIN R., and GRAHAM, JESSIE. *Research in Business Education.* Los Angeles, California: C. C. Crawford (University of Southern California), 1932. Pp. 232. \$2.00.

- KINNEMAN, JOHN A. *Society and Education*. New York: Macmillan Co., 1932. Pp. xii+558. \$2.00.
- LEARNED, WILLIAM SETCHEL. *Realism in American Education*. The Inglis Lecture, 1932. Cambridge, Massachusetts: Harvard University Press, 1932. Pp. 70.
- LYFORD, CARRIE ALBERTA. *The School Dormitory: Administrative and Educational Problems*. Boston: M. Barrows & Co., 1932. Pp. vi+200. \$2.00.
- LYMAN, R. L. *The Enrichment of the English Curriculum*. Supplementary Educational Monographs, No. 39. Chicago: Department of Education, University of Chicago, 1932. Pp. viii+252. \$2.00.
- MORRISON, HENRY C. *The Management of the School Money*. Chicago: University of Chicago Press, 1932. Pp. xx+522. \$4.00.
- NORTON, ALMA M. *Teaching School Music*. Los Angeles, California: C. C. Crawford (University of Southern California), 1932. Pp. 248. \$2.00.
- PALMER, IRENE. *Tests and Measurements: A Workbook in Health and Physical Education*. New York: A. S. Barnes & Co., Inc., 1932. Pp. xii+144. \$2.00.
- Public Health Organizations*. Report of the Committee on Public Health Organization, E. L. Bishop, Chairman. Section II, Public Health Service and Administration, White House Conference on Child Health and Protection. New York: Century Co., 1932. Pp. xvi+346. \$3.00.
- SMITH, WILLIAM A. *Secondary Education in the United States*. New York: Macmillan Co., 1932. Pp. xvi+430.
- Special Education: The Handicapped and the Gifted*. Report of the Committee on Special Classes, Charles Scott Berry, Chairman. Section III, Education and Training, White House Conference on Child Health and Protection. New York: Century Co., 1931. Pp. xxx+604. \$4.00.
- VERNON, M. D. *The Experimental Study of Reading*. Cambridge, England: Cambridge University Press, 1931. Pp. xvi+190. \$3.00.
- WEBB, L. W., and SHOTWELL, ANNA MARKT. *Stanford Tests in the Elementary School: Nursery School to Sixth Grade*. New York: Ray Long & Richard R. Smith, Inc., 1932. Pp. xiv+532. \$2.75.
- WILLIAMS, JESSE FEIRING, DAMBACH, JOHN I., and SCHWENDENER, NORMA. *Methods in Physical Education*. Philadelphia: W. B. Saunders Co., 1932. Pp. 222. \$2.25.

BOOKS PRIMARILY FOR HIGH-SCHOOL TEACHERS AND PUPILS

- ALMACK, JOHN C., and STAFFELBACH, ELMER H. *The Stanford Speller: Grade Two*, pp. 80; *Grade Three*, pp. 80; *Grade Four*, pp. 80; *Grade Five*, pp. 80; *Grade Six*, pp. 80; *Grade Seven*, pp. 80; *Grade Eight*, pp. 80. Chicago: Laidlaw Bros., 1931 and 1932.
- MALIN, JOSEPH E. *Construction of a Diagnostic Test in the Mechanics and Related Fundamentals of High School Chemistry*. Philadelphia: University of Pennsylvania, 1932. Pp. 262.

- PAUL, HARRY G., and MILLER, W. D. *Language Goals: Third Grade*, pp. xiv+236; *Fourth Grade*, pp. xvi+220; *Fifth Grade*, pp. xii+218; *Sixth Grade*, pp. x+196; *Seventh Grade*, pp. xviii+276; *Eighth Grade*, pp. xx+334. Chicago: Lyons & Carnahan.
- REYNOLDS, JAMES J., and TAYLOR, GRACE A. *Modern Social History of the United States*. New York: Noble & Noble, Publishers, 1932. Pp. xii+380. \$1.32.
- RIGDON, JONATHAN. *The Art of Speaking: A Textbook for Colleges, Normal Schools, and High Schools and Handbook for Individual Speakers*. Danville, Indiana: Indiana Publishing Co., 1932. Pp. 320.
- RUGG, HAROLD. *Changing Governments and Changing Cultures: The World's March toward Democracy*. Boston: Ginn & Co., 1932. Pp. xvi+702. \$2.00.
- SUMPTION, DOROTHY. *Archery for Beginners*. Philadelphia: W. B. Saunders Co., 1932. Pp. 138. \$1.60.
- THOMPSON, CHARLES MANFRED. *High School Economics* (Historical and Descriptive): Written for Secondary Schools from the Point of View of Social and Economic Conditions in the United States. Chicago: Benj. H. Sanborn & Co., 1932. Pp. xvi+512. \$1.76.
- YOUNGER POETS: An Anthology of American Secondary School Verse. Edited by Nellie B. Sergeant. New York: D. Appleton & Co., 1932. Pp. xii+436. \$2.00.

PUBLICATIONS OF THE UNITED STATES OFFICE OF EDUCATION
AND OTHER MATERIAL IN PAMPHLET FORM

- EILBERG, ARTHUR. *The Dalton Plan versus the Recitation Method in the Teaching of Plane Geometry Books III, IV, and V and a Study of Responses in the Solution of Original Exercises*. Philadelphia: Temple University, 1931. Pp. 146.
- HENMON, V. A. C., and NELSON, M. J. *The Henmon-Nelson Tests of Mental Ability: Elementary School Examination for Grades 3 to 8; High School Examination—Grades 7 to 12*. Boston: Houghton Mifflin Co., 1932.
- Recent issues of the Office of Education:
- Bulletin No. 15, 1931—*Scholarships and Fellowships: Grants Available in United States Colleges and Universities*, by Ella B. Ratcliffe.
- Bulletin No. 19, 1931—*Circular Letters as a Supervisory Agency* by Jessie M. Parker.
- Bulletin No. 20, 1931—*Biennial Survey of Education in the United States, 1928-1930: Vol. I, Chap. II, Elementary Education*, by Bess Goodykoontz, Mary Dabney Davis, and Mina M. Langvick.
- Bulletin No. 20, 1931—*Biennial Survey of Education in the United States, 1928-1930: Vol. I, Chap. IV, Industrial Education*, by Maris M. Proffitt.
- Bulletin No. 20, 1931—*Biennial Survey of Education in the United States, 1928-1930: Vol. I, Chap. VI, Homemaking Education*, by Emeline S. Whitcomb.

- Bulletin No. 20, 1931—*Biennial Survey of Education in the United States, 1928-1930*: Vol. I, Chap. XX, National Surveys of the Office of Education, by Walton C. John.
- Bulletin No. 22, 1931—*Record of Current Educational Publications, July 1-September 30, 1931*.
- Bulletin No. 12, 1932—*The American Lyceum: Its History and Contribution to Education*, by Cecil B. Hayes.
- Pamphlet No. 24, 1931—*Salaries in Land-Grant Universities and Colleges* by John H. McNeely.
- Pamphlet No. 25, 1931—*Helps for Schools in Celebrating the George Washington Bicentennial in 1932* by Florence C. Fox.
- Special Methods on High-School Level*. Review of Educational Research, Vol. II, No. 1. Washington: American Educational Research Association of the National Education Association, 1932. Pp. 94.
- STETSON, F. L. *Instructional Costs in 226 Standard High Schools*. Studies in Secondary Education in Oregon, II. University of Oregon Publication, Vol. II, No. 8. Eugene, Oregon: University of Oregon Press, 1931. Pp. 301-24.
- UMSTATTD, J. G., and GRINNELL, J. E. *Abstracts of Masters' and Doctors' Theses in Education, University of Minnesota*: Educational Research Bulletin No. 1, July 1, 1928, to July 1, 1929; Educational Research Bulletin No. 2, July 1, 1929, to July 1, 1930. Eta Chapter, Phi Delta Kappa, College of Education, University of Minnesota. Minneapolis, Minnesota: Perine Book Company (1411 University Avenue, S.E.), 1931.

MISCELLANEOUS PUBLICATIONS

- Dictionary of American Biography*, Vols. VI-VII. Edited by Allen Johnson and Dumas Malone. Published under the auspices of the American Council of Learned Societies. New York: Charles Scribner's Sons, 1931.
- Dictionary of American Biography*, Vol. VIII. Edited by Dumas Malone. Published under the auspices of the American Council of Learned Societies. New York: Charles Scribner's Sons, 1932.
- Encyclopaedia of the Social Sciences*, Vols. V-VI. New York: Macmillan Co., 1931.
- HADDOCK, LAURA. *Steps Upward in Personality: What Kind of Person Do I Want To Be? A Source Book of Material for Administrative Officers, Teachers, Sponsors and Pupils in Elementary and Secondary Schools and Civic Organizations, Co-operating with the Schools in Citizenship and Character Development*. New York: Professional & Technical Press, 1931. Pp. xii+358. \$3.25.
- JERNEGAN, MARCUS WILSON. *Laboring and Dependent Classes in Colonial America, 1607-1783*: Studies of the Economic, Educational, and Social Significance of Slaves, Servants, Apprentices, and Poor Folk. Chicago: University of Chicago Press, 1931. Pp. xiv+256. \$3.00.

